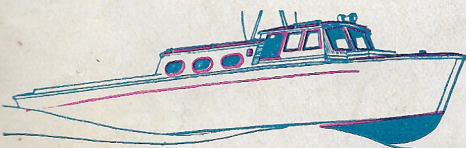


POPULAR FLYING

OCTOBER, 1935

THE NATIONAL AVIATION PAPER

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POPULAR FLYING

THE NATIONAL AVIATION JOURNAL

Vol. IV. No. 7.

OCTOBER, 1935.

Edited by W. E. JOHNS

THE EDITOR'S COCKPIT

MORE PECULIAR PECULIARITIES.

OF the several smug attitudes and platitudes peculiar to the English, not one is more redundant with that air of superiority which we love to adopt, or more childishly inane in its malapert arrogance, than the one which is usually expressed in something after this style:—

"We are notoriously slow starters, and we make the most ridiculous blunders (don't you know), but when we *do* get going," etc., etc.

Who was the first Ciceronian humbug to burble that particularly trite piece of tripe, or set it in print, I don't know; nor do I care; but it has been repeated scores of times since. The thing has become a boast, a kind of pæan. Examine it. Analyse it, and observe the pompous priggishness behind it. In other words: We are so satisfied with ourselves, so confident, that nothing short of a national calamity induces us to disturb ourselves. Indeed, we are loath to bother even then. And, anyway, we can afford to give the other fellow a start, and even make blunders, because it doesn't really make any difference in the end.

This colossal blah was common on the printed page during the first few months of the War, and it was reflected in every form of sound that those who conducted the War from a safe distance could make. Business as usual! Pure blah. We don't want to fight, but by jingo when we do! More blah. By the end of 1917 our masters were not so sure about it. Business as usual wasn't business as usual any more, not by a long shot; but they kept the "muddling through" stuff going as a sort of humorous slogan to cover their crass ineptitude.

Well, we won the War—if anyone did win it—but make no mistake, we thundering nearly lost it, and the lesson should have done us good. Has it? Not on your life. Who won the War, anyway? The merchant princes at home? They were shovelling money into their pockets so fast that they could barely find time to look at the morning paper to see if the War was still going on. The so-called representatives of the people at Westminster? From the memoirs that have been published since, it is quite clear that most of our statesmen (save the mark) were mere wire-twanging wangers concerned with one thing and one thing only—and that was the glorification of their own reputations. In their petty spite, the parties now turn on each other, to jeer at those who blundered most, and chuckle amongst themselves at their own mistakes. If you have any doubt about that, read these books for yourselves.

Their blunders cost them nothing; not even their

jobs. But they cost the hundred thousand or more trusting lads who now lie between Calais and Kut, their lives. I helped to shovel eighteen hundred of them into pits (without the blankets for which their next-of-kins were probably charged), including sixty-seven of my own machine-gun squadron of seventy-five, in front of Horseshoe Hill, in Greek Macedonia. We were sent to take the hill without big guns. Oh yes, they sent guns out to us, but when they got to Salonika there wasn't any tackle big enough to lift them out of the ships. At least, that's what we were told. Later, when we took the hill, and the guns afterwards appeared, there wasn't any tackle powerful enough to haul them up the hill. So we came back again. They sent us boats, too, to patrol that fever-smitten sewer called Lake Dorain—sent them out as deck cargo to the eastern Mediterranean under the mid-summer sun, so that their shoddy timbers warped, and when we put them on the water they sank. So to square the deal they sent us an overdue cigarette ration—in cardboard boxes, during the rains, so that each man got a nice packet of green mildew to smoke. Blunders! Great fun! Never mind; when we *do* get started, etc., etc.

And what about our military leaders. Did they win the War? Win it? What did they know about it, anyway. Did you ever see a Commander-in-Chief leading the troops over the top? Did you ever see one looking over the top, surveying the spot where he proposed to start the battle? Did you ever see one leading an air raid up the Rhine? You didn't! No, neither did I. Did it matter to him that the Huns had been warned and were waiting for us, in jagdstaffels, schlachstaffels, jagdgeschwaders, and what-nots. Did it matter to him if a forty-mile-an-hour wind was blowing the wrong way? Why should it? As long as another ton of bombs was dropped on Mannheim to be credited to his glory account, the cost didn't matter. There was no debit side to that book. Men and machines were at a discount, and could be replaced for the asking.

The answer to that is, I have been told, that a general's life is too valuable to risk. From his point of view, no doubt it is. Well, it used not to be so, in the days of England's greatness, and if it is the case now, then the sooner we got off the high stool before we're kicked off it the better.

No! If we won the War—which I am beginning to doubt—we won it by God's good grace, with the help of a few clever lads who were also very, very, brave. How brave they were, many of you have yet to learn. When you have felt a machine shudder as a burst of ten goes through the tank within a few inches of your spine,

AVIATION BOOKSHELF

BIGGLES AGAIN.

Biggles Flies East. By W. E. Johns. Oxford University Press. Price 3s. 6d.

Biggles Hits the Trail. By W. E. Johns. Oxford University Press. Price 3s. 6d.

When the Editor of POPULAR FLYING went on his holidays and gave me these two books to read he mentioned that ever since Biggles faded out of the pages of POPULAR FLYING a steady stream of enquiries has been received concerning his possible return. Unfortunately, lack of space forbids his reappearance in these columns, but he takes the stage again in the two above named books which are available at all booksellers and libraries.

Biggles Flies East is a war-flying story, and presents a hitherto unpublished adventure in his career. Whilst on leave Biggles is accosted by a stranger who has obviously mistaken him for an officer recently dismissed the Service and to whom he bears some resemblance. The conversation suggests to Biggles that the stranger may be an enemy agent. This proves to be correct, and presently a proposition is made which is, in effect, that Biggles should join the enemy Intelligence Service as a pilot.

Biggles reports the matter to the Air Board, with the result that he is advised to accept the proposal and get himself posted, if possible, to the Middle East, where things are going badly for the British owing to the efficiency of an enemy spy. In this he succeeds, and soon finds himself operating from an enemy aerodrome in Palestine.

Desperate complications ensue, due chiefly to the fact that the second-in-command at German Headquarters suspects him to be what he really is—a British agent. Surrounded by enemies he proceeds with the task of locating the enemy spy who is causing the trouble. You must read the book to learn how the matter ends.

Biggles Hits the Trail is a post-war story in which the stage is set in Thibet. Whilst on an exploring expedition to Western China, Professor Bigglesworth, Biggles' explorer-uncle—who appeared in *The Cruise of the Condor*—hears strange rumours of a mountain that leads him to suspect the presence of radium deposits.

He proposed to equip a flying expedition to the mountain, and this is accomplished. The party find the mountain, but they also find trouble, for the metallic deposits have unpleasant effects on their engines. Worse still, they find that the mountain is in possession of a strange race of people who are harnessing the energy supplied by the radium for an attack on the civilised world. The airmen set out to upset these plans, and in the end they succeed.

The two new adventures are probably the best Biggles yarns yet published. H. L.

Heaven High, Hell Deep. By Norman Archibald. Heinemann. Price 8s. 6d.

This is another importation from America in which a war pilot tells us of his experiences, at first in the sky and, secondly, in a German prison camp. One feels that had he told the bare facts simply, instead of aiming at a

(Continued on page 402)



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The official journal of the De Havilland School of Aircraft is now published by Pitman's. Price 6d. per copy (7d. by post).

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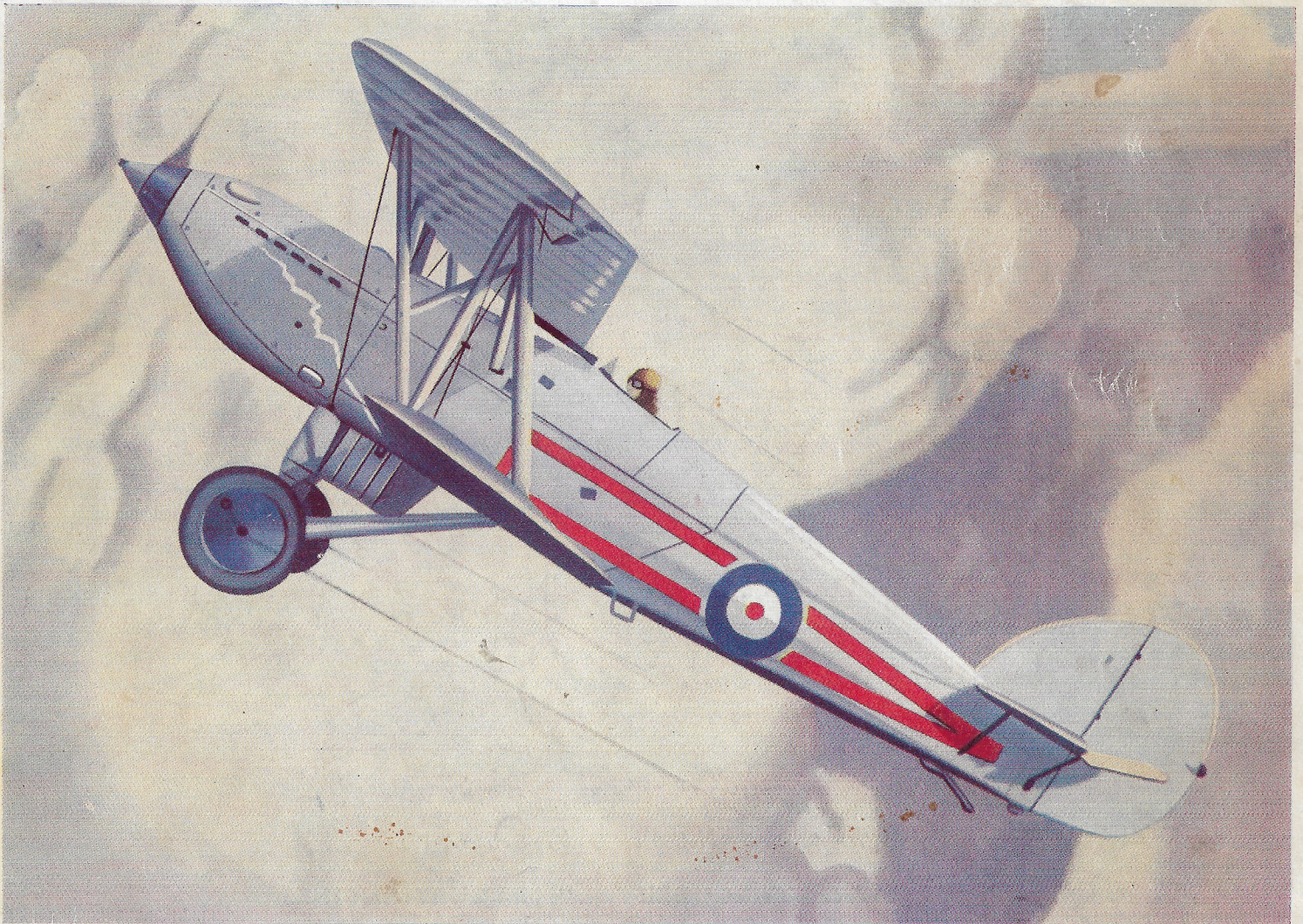
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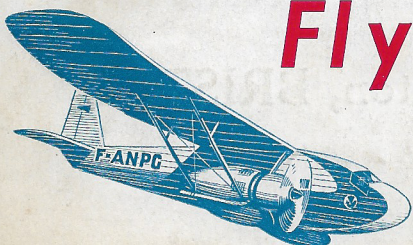


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POPULAR FLYING

THE NATIONAL AVIATION JOURNAL

VOL. V. No. 3

JUNE, 1936

Edited by W. E. JOHNS

THE EDITOR'S COCKPIT

TIME MARCHES ON.

SO it seems as if Mussolini has won his war. What a triumph for civilisation! What a victory for progress! What a picture for posterity! Fifty civilised nations, a hundred million Christians, pledged on their solemn word to protect the weak, look on unmoved while one of their number devours the weakest, deaf to its entreaties, heedless of its anguish; while a mechanised army mows down a defenceless people, lays waste its homes with high explosive and tears the bare flesh from the bones of the defenders with mustard-gas. Shades of St. George! What knight errantry! What chivalry!

Now indeed can the poor benighted heathen see that vaunted, painted lily, the white man's "promise" in all its tawdry glory; saying to themselves, this is what comes of joining a Paleface League and getting mixed up with those who stalk the world with the Holy Word of their God held high in front of them to conceal the poisoned dagger behind their backs.

A League of Nations. Pah! Don't make me sick. A league of rabbits. We alone of the whole scurvy mob moved a man, a ship, or an aeroplane to save our shame-flushed faces. And then called halt while politician Laval, with a dove on his shoulder and his tongue in his cheek, connived in as dirty a deal as was ever handed out to a nation of ignorant savages since our own famous Admiral Hawkins, with "Trust In God" emblazoned on his banner, started the world's worst racket by running the first load of slaves from Africa to the West Indies to make pin-money for a devout Queen. Well might he name his ship the *Jesus*. Ha, ha!

Well, those who live longest, and I hope there will be some Abyssinians among them, will see France and Italy get what is coming to them. And when that time comes, shall I fight on their side at Mr. Eden's bidding? (Pardon me while I smile.)

Hauptmann kills a baby. Execrated by the world he goes to death in the Chair. Under the bloodstained banner of Christendom Mussolini slaughters a thousand, boasts of it and gets away with it. Maybe my ordinary intelligence is breaking down under the strain of trying to work it out, but there is something about this that I don't understand. Seems to be wrong somewhere. One thing only do I understand, and that is the speed with which these heroes of Rome will move towards the sea when they observe a row of coal-scuttle hats topping their northern horizon. That will be a very different story, my masters.

Well, well. *Viva! Avanti!* Onward, Christian soldiers—and don't forget your phosgene.

* * * * *

Politics, is it! What a nasty business—but a profitable one, mind you, if you've got the crust to stand it. If you win you get a peerage. If you lose, you lose nothing, assuming that you start with nothing, as many do. Whether you win or lose you make money. Yes sir, yes sir, three bags full. Ask those who, out of their undying love for their Motherland, have accepted important Government jobs even though their salaries of a few thousands a year did not cover their expenses. Noble fellows.

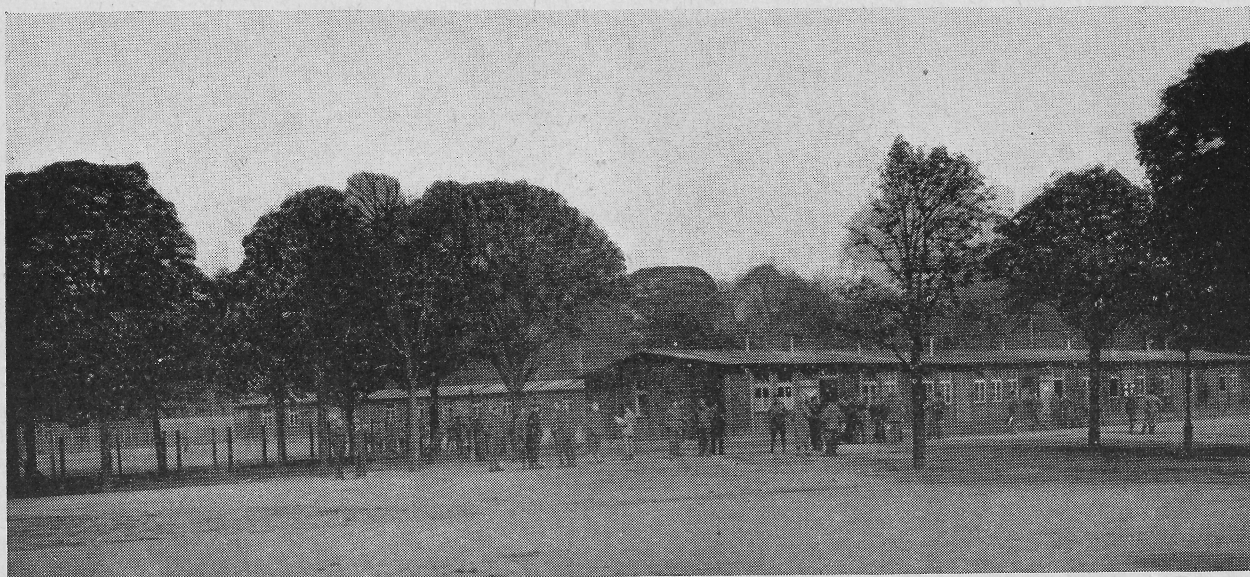
No other business is quite so profitable. Take soldiering, for instance. If you lose you lose your life, and you can't lose much more than that. If you win, and if you are lucky, and if you are popular, you may get a bronze Cross worth fourpence-ha'penny; but if you ever have the audacity to think for yourself and say what you think it's unlikely that you'll even get that. Mick Man-nock, for instance, hazarded his life hundreds of times—once too often—in order to shoot down seventy odd enemies of the King in mortal combat, but it was touch and go whether he got his Cross or not. It took a year to reach a decision about that. How it must have tickled him, sitting up there in Valhalla.

Seems kind of funny, doesn't it. Still, that's the way it goes.

* * * * *

I'm spending no more money in France or Italy. In future when I change sterling it will be into marks or pesetas. Spain will do for me. And it should do for you if you can unbend your stiff British neck far enough to get under the skin of people who have not lost the capacity for simple enjoyment, who are always happy to help you without extending an expectant palm. There were a lot of rotten things said in certain British papers about Spain not long ago, and I could tell you the reason. But I daren't. But, in passing, I dare tell you this:

The great sheet-anchor of the antagonists of Spain (when Spain is short of money for advertising) is bull-fighting. I don't like it myself because I've seen so much human blood shed that blood-sports of any sort no longer interest me. But never overlook this fact: in bull-fighting it is the man *himself* who at the finish stands face to face with a maddened bull with nothing more between him and eternity than a yard of slender, tempered steel, sharpened at one end. If he makes a boob—which sooner or later he does—he takes a toss straight into the next world. And if that isn't a fairer proposition as between man and beast than hunting a boxed stag with hounds, or blasting the life out of trapped pigeons with a twelve-bore at point-blank range—both noble English pastimes—then there is definitely something wrong with my mental equipment.



The general "clearing-house" for officer prisoners at Karlsruhe.

KRIEGSGEFANGENENLAGER

(War Prisoners Camp)

By W. E. J.

I HAVE never seen comparative figures but I imagine that the proportion of R.F.C. officers who became prisoners of war was larger than any other corps, and we need not look far for the reason. At least 90 per cent. of the flying hours knocked up by a pilot in France were put in "over the lines" where, quite apart from the hazards of shot and shell, engine failure could have only one ending, unless one was close to home and had enough altitude to reach it. Considering how men and machines were overworked, it is remarkable that more officers did not find themselves down in that forbidding area known broadly as "Over the other side."

Now in all the war-flying stories that have appeared in POPULAR FLYING—and there have been many—the author has ended his story if or when he was shot down in enemy territory. But what happened then? It struck me the other day that some of you might be interested to know, for in many cases the arrival on the scene of the boys in grey was the beginning of a story rather than the end. It wasn't merely a case of being a prisoner of war and letting it go at that; there was more to it, although I doubt if the immediate reactions and subsequent adventures of any two officers were alike.

I have another reason for telling you about these things, quite apart from casual interest. One day we might find ourselves involved in another war, in which case some of you may hit the carpet in the wrong battlefield; so a few tips should be worth remembering.

Before dealing with personalities, let me run over the ground generally. On arrival in enemy territory,

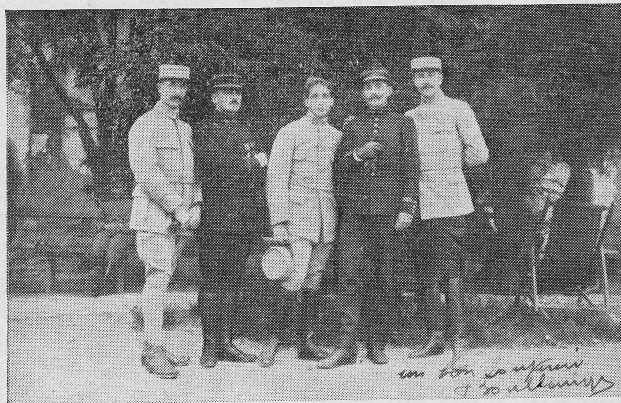
you were—I had better stick to the past tense—from the enemy's point of view, more than a mere prisoner. You were a mine of information—if only it could be extracted from you. I need hardly say that most officers closed their lips, but some babbled in their cups, and I know of one case where an observer stood outside the door and heard his craven pilot spilling all the beans he knew out of sheer funk. But, as I say, most officers refused to speak. Naturally, the enemy were prepared for this, and many were the ruses employed to wring or trick the information from you. But here let me interpolate an observation.

It is all very well to sit at home and think of what you'd say, and what you'd do, and what you wouldn't do. You'd tell the blighters what you think of them. Would you? Don't bet on that. It sounds fine in books, but when it comes to cold, hard facts and you're standing near a wall with a bayonet on each side of you and a grim-faced Prussian in front of you, heroics are apt to take a pace to the rear. Believe me, I know. And if the Prussian

happens to suggest, as mine did to me, quite dispassionately, that I should shortly be having a bullet for throwing bombs and then being insolent about it—well, you're apt to wish you hadn't been quite so free with expressions like "Blankety-blankety Huns" when you were talking to them. Muzzles of loaded rifles and the points of bayonets take on a new significance, and an angry Hun can look a nasty piece of work at close range—not a bit like the cartoons you're accustomed to seeing in the newspapers in the Mess.



Boche official photo of W. E. J. after ten days' "solitary" and the first shave for three weeks.

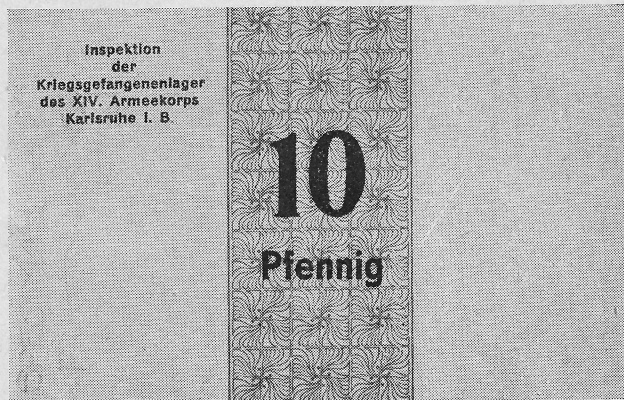


These French prisoners had been in durance since 1914. Boulenger, of the Batt. d'Afrique (on left) was a good scout, and after the Armistice gave the author a pair of red breeches so that he might return home "decently" clad.

Then again, you're not exactly normal. You've just crashed after a scrap in which you've seen Old Man Death waiting for you in the spinning landscape down below. The rip-smash of bullets is still in your ears; you've seen the ground rushing up. (I saw the ground spinning up for a week.) You've seen the grey coats coming at the double, with bayonets at the prod. No, you're not normal. However tough you may be, you're shaken, physically and morally. You feel sick.

For a little while, then, while you imagine your fate hangs in the balance—as indeed it may—you're not feeling so good. But the arrival of an officer reassures you. He knows his stuff. He knows you are worth more to his side alive than dead, and forthwith things begin to brighten up—for a time. The velvet glove is always tried before the mailed fist. Everything is done, therefore, to set your mind at rest, and the inevitable reaction is that "the Hun isn't such a bad fellow, after all." He chats; you answer. That's what he wants. But watch out, he'll trap you in a minute.

For the next twenty-four hours anything can happen.



Specimen of prison money in use in prison camps. Prisoners were not allowed to possess German currency, but they could buy these notes with cheques, which were redeemable in gold by England, via Holland.

A favourite trick was to take you to the Mess of the squadron that did the dirty on you. (We did this, too, of course.) There, under the influence of wine and good fellowship, you expand. And as you expand, you talk. That is, if you're a fool. If you are wise to the game you'll go steady with the wine, because the cheery lad on your right is an Intelligence Officer, specially trained for the job. Actually, behind his smiling eyes, he hates you like Hell. He probably knows all about you from previous foolish prisoners, knows that you killed his pal. He may look drunk, but he's cold sober. But he doesn't let you see it. He is pumping you steadily all the time, making a mental note of every word that passes your lips. Make one slip and you may send a thousand men to their deaths. Never forget that. And so the evening passes.

The next morning you will be taken to a headquarters for official interrogation. Bear in mind that by the Rules of War you are compelled to answer two questions. No more. Your name and rank. They will want to know the number of your squadron for a start, and this is how they will go about it.

On arrival at headquarters you are given a chair



Some of the bad boys of Bavaria. Two groups of R.F.C. prisoners at Fort Ten, Ingobstadt.

outside the orderly room door. The bayonet which you will see every day for the rest of your life as a prisoner is beside you. Orderlies stare at you as they pass to and fro. Officers—real live Huns in spiked helmets, with iron crosses on their tunics—come and go. At first this is all very interesting, but by the time an hour has passed it begins to pall. What is going on behind that door? What fell schemes are being hatched for your disposal? Two hours pass . . . three hours . . . and your bored nervousness and irritation gives way to mild anxiety. Ah! At last. The door opens. The guard spring to attention and in you march. Your reception is quite different from what you thought it would be. No brutal-faced ruffian snarls at you. On the contrary a very pleasant fellow hurries to meet you, a smile on his face, one hand outstretched and an open cigarette-case in the other. "Hello, old man," he says, in accentless English. "Had a spot of bad luck, eh? Ah well, fortune of war, don't you know—have a gasper. How did it happen?"

Now believe me when I tell you that it is very difficult indeed to meet this sort of stuff in the only way it should be met—which is with a cold and stony stare. He looks so genuine, so sincere, that you feel it would be churlish not to reciprocate the spirit. Moreover, you want to talk. You're all keyed up. Fed up. You're sick of the suspense and want to tell somebody about it—get something off your chest. That, of course, was the reason why you were left so long outside the door.

But if you speak you are lost, for it is almost impossible for you to say anything about the war that is not of value to the enemy. Once you start he will lead you on, and before you know where you are you will be chatting. Oh yes; while you are matey he will be. That's his job. But it's all false. Really, he hates the sight of you. Keep that ever in your mind.

"Look here," he says. "Why not be reasonable? We have a special camp for officers who care to be—er—reasonable. Nice place—girls, cigarettes, books, and so on. By the way, what squadron are you with?"

"I've forgotten," says you.

"Oh, excuse me a moment," he says, "I've forgotten something myself. Here, amuse yourself with these; I shan't be a minute." He passes you an album of

photographs and out he goes. You're alone—or you think you are. But if you look at those photos you're sunk. They're photographs of squadrons and aerodromes in France. Your own is amongst them, and unless you are a poker player you'll pause, or start, or flicker an eyelid when you see the place where you would like to be. That tells the hidden watcher all he wants to know. Back comes your friend into the

room. He knows your squadron now.

"Well," he says, "and how are things looking at Azelot? Is so-and-so still with you?"

You just look glum and say nothing.

"Would you like to write a letter to your people to let them know you are all right?" he suggests. "I'll get one of our boys to fly over right away and drop it."

Will he? Not likely. He wants to confirm your aerodrome, which he hopes you'll tell him in order that one of the boys can drop the letter at the right place. And so it goes on, hour after hour, while by trick and wile he tries to trap you into saying something. Behind a curtain a concealed Hun is taking down in shorthand everything you say. Remember, you needn't speak. You're not compelled to, under the Rules of War. But you mustn't tell lies. That is not allowed, and if you're caught out at it, you'll be punished.

Many people did lie. I lied myself.

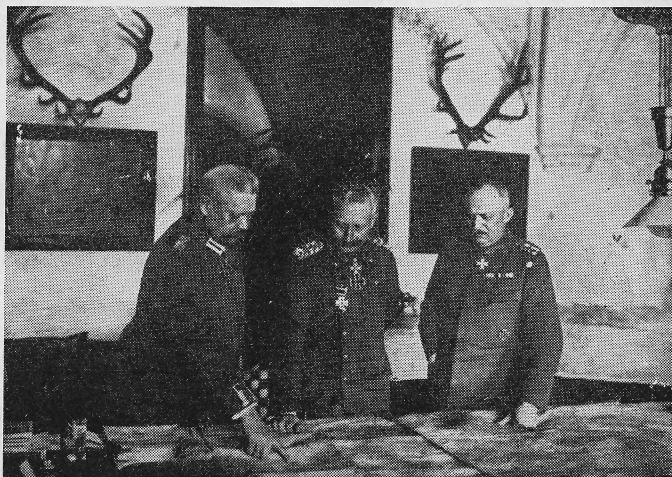
I told every lie I could think of that my "friend" and I fancy most people did the same. I know a Canadian whose imagination got completely away from him when he started to describe an aeroplane that had just arrived in France

and was going to sweep every Hun out of the sky. He should have stopped there, but he didn't. He went on to describe the machine, which was fitted with a two-thousand horsepower engine called the "Liberty Bird." This machine, he claimed, flapped its wings. But this was too much even for the Hun to swallow and the crazy Canadian was invited to sign a document to the effect that he had told the truth. Naturally, he refused, and the last I saw of him he was on his way to the salt mines in Siberia.

When the interrogation is over out you go, and your guard marches you to a cell. To your relief there is a British officer there, also a prisoner, looking just as fed



One of the 100,000 gallant Italian allies who left us holding the baby in their own country—when the Boche appeared on the banks of the Piave. He was the orderly floor-scrubber and washer-up at Landshut Island Camp, Bavaria. The Boche had no time for them and allowed them to die of plague in hundreds—at least, so this fellow told us.



A stout effort if it is true. The note we have with this photograph of the Kaiser and Hindenburg in a dug-out near the front line says that it was taken by a prisoner with a concealed camera during interrogation. It seems highly improbable though.

up and miserable as you are. Don't speak to him. He's a Hun. He is wearing R.F.C. uniform and he speaks English as well as you do, and he knows so much about the people you know that it seems incredible that he can be an enemy. But he is. Later you will be put in another cell with an officer you know. Good, now you can talk. But every word you say will be taken down by a Hun shorthand writer who is sitting at the other end of the dictaphone that is concealed in the wall. So you see that it is never safe to talk about anything that matters.

This sort of thing goes on for some time until you have either been pumped dry or else proved conclusively that you are not going to be pumped. In the latter case you are likely to be threatened. The smiling face of your "friend" takes on its natural look and you see the wolf in sheep's clothing. Just how far he will go depends on how badly he wants certain information, but anyway, it is likely to test your nerve. I was tried by Court Martial for bombing undefended towns, and the whole thing was gone through in a very formal manner. At the end I was sentenced to death, but to this day I do not know whether the whole thing was a farce to intimidate me into talking, or whether it was really meant. Actually, it was not so bad as it sounds, because by that time I was so utterly sick, and so Bolshie, that I didn't care much whether I was shot or not. Sometimes the Hun rather overdid it.

Well, that broadly was what happened during the first few days of my incarceration. If ever it happens to you, don't speak. Look dumb and be dumb. It's harder than it sounds, because quite apart from anything else you are liable to get some severe shocks, shocks that take the wind out of your sails and make you give yourself away if you are not very careful. Let me give you a few examples of what I mean by telling you what happened to me before I went down with the bad lads to Ingolstadt.

I was shot down during a bomb raid on Mannheim. During the few preceding weeks someone flying a D.H. 4 had hit a Sunday-school and bumped off quite a lot of children, and the squadron had made sad work of a procession in the streets during a religious feast. Consequently, I hardly expected to be greeted with a kiss. I was quite right. I wasn't. I was greeted with an upper-cut that knocked me for six. At the time I was leaning against the wreck of my machine scraping blood and grass off my face trying to work out what had happened, and whether I was blind or not. At the same time being subconsciously aware that I must try to reach my observer, who was under the engine, in order that I might set fire to the whole works with the Verry pistol that was in the knee pocket of my Sidcot.

To the unexpected attack of the Bosch N.C.O., who seemed beside himself with excitement, I reacted as most people would have done, for I was already quite angry with the lads who had done the dirty on me, not so much for shooting me down as for making a target of me after I was on the ground. So I got on to my feet and made a rush at the fellow who had hit me. I did not reach him, however, for a bunch of toughs threw themselves on me and down I went again.

I was then half dragged, half carried, to the school-room in a little village named Ettendorf where, with my dead observer at my feet, I was interviewed by the

squadron that had shot me down. The chief object for their visit appeared to be to find out if I knew the colour of the machine that had actually fired the fatal shot. As if I knew, when there were nearly a score of them at it! Incidentally, this arguing about who was to have the credit for "getting" me was something that could never have happened in a British squadron. Later, a doctor came and very nicely took the glass out of my face and tied up my wounds, which were only of a superficial nature. A bullet had chipped a piece off my right hip, another had scored my scalp, and quite a bit of skin had been knocked off here and there in the crash.

I spent that night in a cellar under the school while all the children of the district gathered outside and chanted "Schweinhund Engländer" and other observations of an endearing nature.

The next morning I was taken on a tumbril to the Bosche H.Q. at Zaburn where I think my observer was buried. At least, he accompanied me there in the primitive conveyance. After the usual interminable wait I was taken in to be interrogated, and the first words of the "friendly" lad who greeted me will give you an idea of the efficiency of the German Intelligence people.

"Hello, Johns," he said. "Who's commanding 55 now Major Gray's on leave?"

If Group Captain Alec Gray will look at his old log-book he will find that he went on leave on or about September 12th, 1918.

Frankly, I was so completely taken aback by this question that I could only stare. Actually, the Hun overreached himself, for my astonishment was so genuine that I fancy it bore out my assertion that I didn't know what he was talking about, and I saw a glimmer of doubt creep into his eyes. However, he then gave me another shock by handing me a snapshot of myself taken in the orchard at Azelot—although there was nothing to show that it was Azelot. Goodness only knows how he got it, for I had no recollection of it being taken. I still have the photo.

As a matter of fact, this fellow slipped up on his own conceit several times. For one thing, when he asked me the horse-power of my engine I told him that as he'd got it he ought to be able to find out for himself. Whereupon he told me that he knew. It was, he said confidently, a 275 h.p. Rolls-Royce Eagle VII. I congratulated him and admitted that he was quite right. Actually, he was wrong. It was the new 375 h.p. Eagle VIII—probably the first to go down in Germany. I hoped, of course, that he would accept my statement and take the engine for granted instead of examining it closely, for the difference between the two Eagles was not apparent externally.

He then made the usual suggestion about the "special camp" for good boys, to which I replied that there was nothing doing, and that I had finished talking about the War, anyway. I said it quite definitely and he knew that I meant it, and his manner changed from that moment. However, we went through the usual business of looking at photos, when I stopped and stared hard at an aerodrome that I had never seen before. Then we came to the "send a letter home" business, and that caused a show-down. I simply wrote "Prisoner of War. 16.9.18. Johns, 2/Lt." and addressed it to

(Continued on page 148)

KRIEGSGEFANGENENLAGER

(Continued from page 130)

the Air Board, London. I think he thought I was going to address it to my squadron, and he gave me a dirty look when he saw the address. He also said some hard things whereupon I got hot and called him a Hun, which he didn't like at all.

This sort of thing went on for two or three days and I began to perceive that I was not popular. It ended with the court martial that I have already told you about. One other thing occurred which is worthy of note. One day a fellow blew in on me and asked me what I thought of the new Snipe. I told him I didn't know what the hell he was talking about, which was true enough, for at that time I had never heard of it. At that, he trotted out a complete set of photos and G.A. drawings of it. The date would be about September 19th, so those who know when this machine was first wheeled out of its hangar will be able to work out how long the enemy was getting hold of it. After that I was sent to the civil gaol in Strasbourg, where I believe I first met Harley, a crazy South African S.E. pilot who cursed the Huns to all eternity in low Dutch on every possible occasion. If he sees this he may remember the Hun booting him in the ribs for speaking out of his turn when we were in the train on the way to Landshut. It was a brutal kick and curled him up for some time.

Generally speaking there was only one topic of conversation among officers, and that was escape. In the early days of the War it was not very difficult, but by 1918 it took some doing. Failure meant solitary confinement, which was rigorous and a good deal worse than it sounds. I had some of it. No, the Jack Shepherd stuff, like many other things, is fine in books, but in fact it is both harder and takes more nerve than you might suppose. I had two shots at it, but both resolved themselves into pure farce, although the humour was not so apparent then as it is now. Once I was away for three days, but at the end of that time, during which nothing passed my lips, I was so desperate for food that I was prepared to go to any lengths to get it. (Try going without food or water for three days, starting with an empty stomach, and see what its like.) On the third day I raided an orchard, at dawn, near a farmhouse. To this day I haven't the remotest idea where it was. I heard a dog bark, and was just reaching for an apple when I heard a nasty sound just behind me. Springing round I looked straight into the muzzles of a twelve-bore in the hands of a burly Hun farmer. He wasn't more than ten yards away, so I did the obvious thing. I performed the operation known in cowboy parlance as reaching for the sky, and I did it without any hesitation whatever. I've nothing to say to a twelve-bore at ten yards.

The other show was a most desperate and foolish affair. It happened in the gaol at Strasbourg. Brought out of my cell one morning for exercise I found a dozen or more American soldiers in the courtyard. A sergeant sidled up to me. I never learned his name, but he was a stout lad. Ignoring the sergeant-major's order to "stop talkings" (my God! he was a swine, that sergeant-major, if ever there was one), he asked me if I wanted to make a get-away. On receiving my assurance that it was my dearest wish he asked me if

I would fly him back to France if he got me out and if we could find an aeroplane. I told him I would—with bells. I may say here that this "pinching an aeroplane" idea was first and foremost in every airman prisoner's mind, but I don't think it was ever done. Anyway, my American partner told me that when we were sent back into the gaol I was to run straight down the corridor past my cell to the lavatory at the end. He would do the rest. There was no time to say more for the sergeant-major was bearing down upon us with a nasty glint in his eye.

I knew this lavatory well, for during the past ten days my only source of recreation has been beating on my door and demanding to be taken to it—quite unnecessarily, of course. Like the rest of the building it was stone, and had an iron-barred window. One of the bars was made to slide up and down in order to permit the entry of a large hosepipe that was used to empty the thing inside. Normally, this bar was locked in place, but somehow the American has managed to break the lock, although I didn't know that at the time. Outside the window there was a drop of about twelve feet into a yard, patrolled by a sentry. On the other side of the yard there was a high wooden fence surmounted by barbed wire, and beyond that a river—possibly the Rhine. How all these obstacles were to be overcome, I did not know; nor do I to this day. But the first thing was to get out of the gaol itself.

At the command "insides" I walked to the corridor, closely followed by my guard, but as soon as I reached it I set off like a lamplighter. The guard at once gave tongue, and glancing over my shoulder I saw him take a purler as the Yank handed him one and sped on after me. Looking back at this incident I realise that we both must have been crazy. Nevertheless, we reached the lav. and slammed the door behind us. In a flash my American had knocked the lock off the bar and pushed it up. "Out you go," he said.

Now unfortunately—or perhaps fortunately—I'm a trifle broad in the beam, and half-way through, wriggle as I would, I stuck fast. At that moment the sentry came round the corner and spotted me at once. Letting out a yell he dashed up to the window and made a pass at me with his bayonet.

By this time—I need hardly say—I was trying to get back, but the American, who knew nothing of the sentry below, only pushed me all the harder. What a pandemonium! I could hear the sergeant-major bellowing outside the door, but my eyes were on the bayonet. The sentry was shouting at me in German to get back and I was shouting at him in English that such was my desire, but I couldn't. I don't think he believed me. God knows what would have happened but at that moment the door was burst open, I was seized by the feet, and dragged back inside with a wrench that nearly pulled me apart. I landed on the stone floor with a bang, and from a horizontal position saw the American dragged outside fighting as good a fight as one unarmed man ever put up against a mob armed with rifles and bayonets. I never saw him again. I came in for a bit of rough handling, and afterwards got ten days solitary for my trouble. But I only did seven on that occasion as I was sent on to Karlsruhe.

Anything can happen to you when you are a prisoner. Take it as it comes—but don't talk.

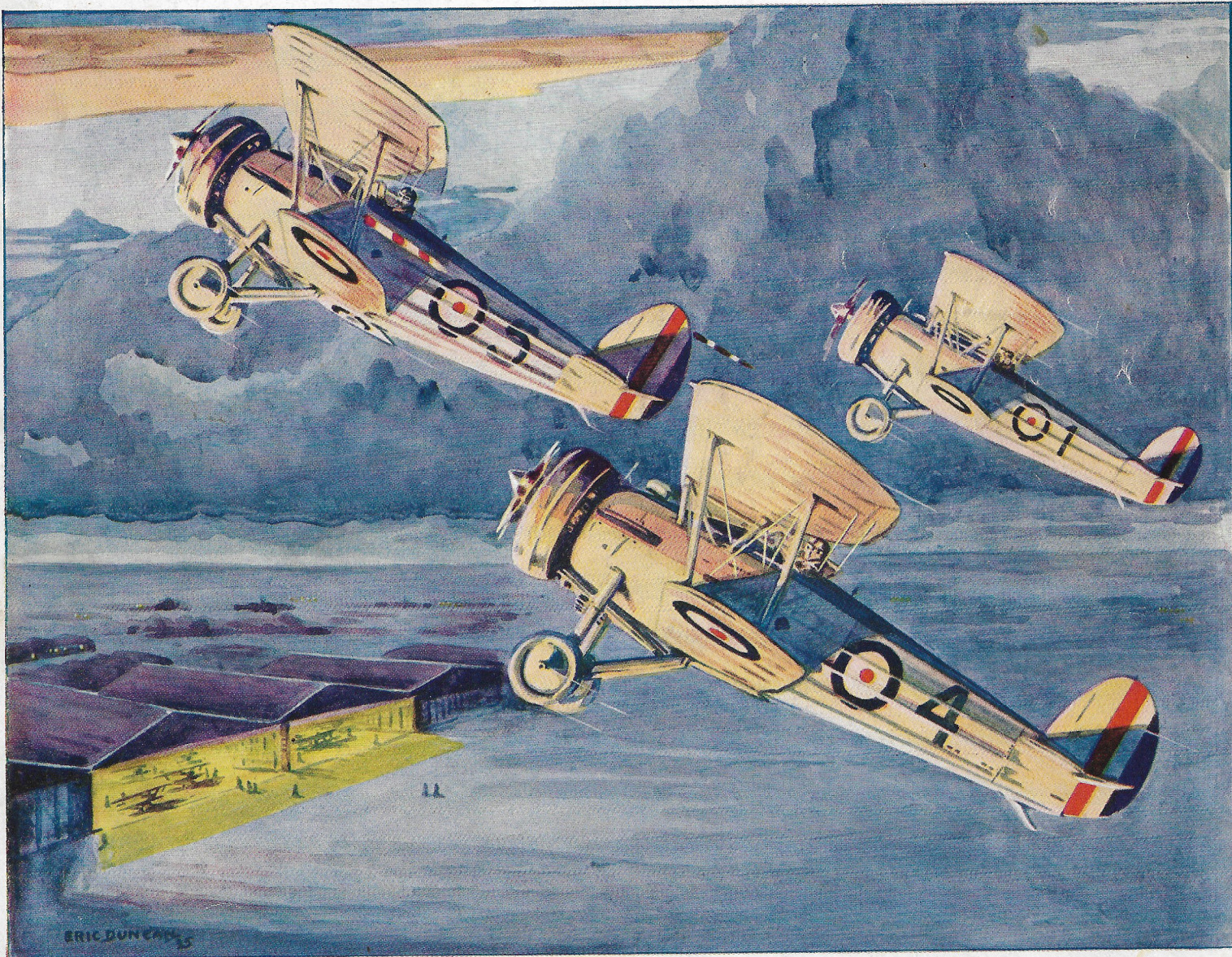
CHINA SPREADS HER WINGS

POPULAR FLYING

SEPTEMBER, 1936

THE NATIONAL AVIATION PAPER

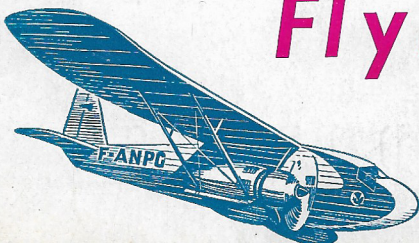
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POPULAR FLYING

THE NATIONAL AVIATION JOURNAL

VOL. V. No. 6

SEPTEMBER, 1936

Edited by W. E. JOHNS

THE EDITOR'S COCKPIT

THE STATE OF THINGS TO COME.

REVOLUTIONARY measures only become dangerous when the government against whom they are directed has made itself disliked by oppression or incapacity. While a constitution is endurable the majority of sober-minded citizens will not only support it, but will challenge any move made to overthrow it. But the time may come when even their patience is exhausted, and they may feel that any change is better than none.

Then authority goes by the board. An opposition springs up composed of all sorts and conditions of men, patriots, theorists, economists, fanatics and adventurers, who, seeing in the moment an opportunity for self-aggrandisement, wealth or power, garb themselves in a cloak of false patriotism and protest to the mob from street corners that no harm can be done by snatching the reins from hands that are no better than their own.

Thus begun, disruption follows, each phase following the last on well-established lines. The opportunists succeed. The government falls. The new party splits into two, the moderatists and the extremists. The extremists carry all before them until the masses, sickened by folly and insecurity, rise again, and a stable government is restored. So it was in Greece and Rome, and, later, in France and Russia. And so the years roll on.

By the autumn of the year 1936 the Government was reaping the bitter harvest of its ill-advised policy of armament reduction, particularly in the matter of the newly established air arm. Indeed, in its failure to provide a sufficient aerial fleet until irreparable damage had been done lay the germ of the many ills that were to follow.

The story is not new. Military upheavals work along clear lines of demarcation, the direction of which alters little in any age or country. Military organisations and weapons, once sufficient and salutary, remain unadapted in changed conditions and circumstances. The traditional holders of military and naval power, seeing their interests threatened, regard innovations with bitter hostility and oppose proposals for reform as the schemes of upstarts who are trying to seize something that does not belong to them. Thus it was at the time of the introduction of the fighting aeroplane, which, in the earlier part of the 20th century, was the swiftest and most deadly weapon human ingenuity had yet devised.

From Ethiopia the eyes of the civilised world had turned to the Rhine, and then to Danzig; Italian influence was at work undermining British authority in Egypt and Palestine; in the Far East the Japanese

were openly massing for a resumption of their march westward, flagrantly and with impunity flouting the so-called control of Western nations.

At home, the Hoare-Laval *émeute* during Italo-Abyssinian hostilities, the unsavoury Thomas affair, and the farcical collapse of sanctions, were chief among a host of lesser scandals. Londonderry, who had long played Curious to Baldwin, turned on his master, and it was clear to the meanest intelligence that the once-popular John Bull bearing and briar-pipe combination which had carried the Prime Minister so far could not alone support him much longer. One section of the Press clamoured for his retirement, heaping abuse and ridicule upon him in turn, while the new leaders of Europe, with their national newspapers and the newly invented "wireless" well under their thumbs, took every possible advantage of the forlorn picture provided by a leader of the British Empire who was not strong enough to control his news services, and a Press that was not strong enough to pull down its Prime Minister. One or the other should have succeeded.

Politics, which in the hands of indifferent politicians had endured for so long without a policy, ended as they were bound to, in chaos. Some there were who demanded an alliance with France, some with Germany; others stood for isolation. One section applauded Italy, another Abyssinia, while the civil and military services of the Empire looked on, torn by doubt and uncertainty, wondering how the thing would end. Hitler, leader of the New Germany, tired of bearing the insults uttered by mediocre statesmen and printed by the British Press, when in fact he was waiting for a friendly gesture, turned to an Italy already embittered against Britain by her attitude over the conquest of Abyssinia. France joined hands with the swiftly arming Russia.

Clearly, all the English-speaking peoples of the world should have got together, when, by reason of their vast wealth and power, they could at least have slowed down the onrushing juggernaut, even if they could not have stopped it altogether. One wonders why such an obvious solution to their problems did not occur to them, or if it did occur to them, why such a natural alliance could not have been brought about. But it was not, and so the wave that was to engulf western civilisation rolled on, unchecked.

By this time the workshops of the nation's armament factories were reverberating with the clang of metal as the Government strove to repair a seemingly irreparable blunder. But the trouble did not end there.

The middle classes, bearing, as always, the burden of the storm, regarded with alarm the dangerous road of national control towards which their faces had been set,

against their will, by the men whom they had put into power to obey their will—milk control, pork control, road transport control and the like, which they now perceived to be a measure which had as its inspiration a means to enrich the few at the expense of the many. Agriculture fell into evil case. The once-free cultivators were disappearing from the soil and pouring into the cities, as they had in similar circumstances two thousand years before, where they lived—again as before—on the charity of the State. The few who remained on the land could no longer sell their produce as they willed, where they willed, or at their own prices, not even to their labourers, for the law compelled them to pay tribute to the highly organised bodies who had seen that in the nation's food supplies lay a swift and certain road to affluence.

And so the people grumbled, and when the people grumble the people are always right. The rich, they saw, were extravagant, living a life that held nothing outside material pleasure, their one occupation being the accumulation of wealth without labour in order that they might spend it in idle enjoyment. The younger set of the upper classes were degenerate. They looked it. They showed it in their faces, their manners, their clothes, and in their homes, which were not to be compared with those of the Victorians to whom they seldom referred without a jibe or sneer. At that time of all times, when the walls of national prestige were

tottering, and institutions falling almost faster than people could watch them, the patrician classes should have been at least circumspect in their indiscretions. But they were not. So they lost the respect of the people, which was, after all, the only thing that kept them in their place. The people, now looking hard, saw through the thin veneer of romantic tradition, and were sickened by what they saw. They perceived that something stronger was needed, leaders who could hold their places by their own personality, and not a false inherence maintained by constant adulation in the Press.

To those who had been soldiers in the Great War it was revealed that patriotism stood merely for the survival of the Party that would maintain the existing order of things. To the workers, kept quiet by morsels thrown to them when they became unruly, patriotism came to mean a new deal that would overthrow that system. In fighting to save the Empire, they had, they were told by the Bolshevist agents from Russia, merely fought to save the privileges of the wealthy, and their estates.

Sport, except on school playing fields and village greens, had become a travesty. Commercialised and exploited, it simply formed a medium for gambling to which the public flocked regardless of the fact that they were participating in a lottery in which the dice were loaded against them. Such was the curious form of the law of libel in those days that no man dare



Two purl, one 'plane. A nice piece of knitting to mend the Geneva Jumpers now being manufactured by the leading European messmakers. Darn good stuff!

write or print the truth (when the truth was often plain for all to see) but could only hint in the hope that the public would be able to read the real message in the veiled warning.

Religion, which in the past had been one of the nation's bulwarks, had almost subsided into cant, but those who spoke their minds declared that pictures of ecclesiastics blessing troops equipped with poison gas were not in accord with the teaching of the Founder of their creed.

And so the wheels of history revolved in their allotted gears. Reformers, conscious perhaps of their sincerity, stormed and raved at vested authority and demanded a new constitution. They saw—or thought they saw—their path and their objective clearly. Parties rallied round their standards, the one side prepared to fight for what it held, crying that the security of the State rested upon the positions which they enjoyed, the other side prepared to confiscate all it could lay hands on.

Oswald Mosley, wise enough to see that those entrusted with the administration of the Empire were, in fact, proving themselves wholly incapable of doing so, and that a mob fed by a Treasury dole would soon be unwilling to fight its battles, endeavoured to establish a Fascist Party, with Italy and Germany as questionable examples of its possibilities; but the idea of a Dictatorship was repugnant to normal British outlook, and without a Press the movement was foredoomed to failure.

And so, following the lead financed and organised by Russia in Spain and France, came the first whispers of the cunningly named Popular Party that was to take matters from bad to worse.

* * *

And what, you may ask, is all this about? Merely this. I am doing my day's good turn. When the poor wretch who is sitting in this chair in the year 2936, editing the September issue of the 1005th volume of POPULAR FLYING, wants to find an excuse for the failure of Britain to get into the first three in the Annual Inter-planetary Race round the Solar System, he will be bound to make some passing comment on the beginning of the decline and fall of the British Empire through the failure of its leaders to grasp the importance of Air

Power. Then, instead of having to work it out for himself, all he will have to do will be to turn up his back numbers and find it already written for him.

* * *

And if you can't bear to look facts in the face, don't blame me. I don't make history; I only try to write it down. And if, from the foregoing, you wonder what my politics are, I will set your doubts at rest. I haven't any. What do they matter? This blind obedience to a Party, from family custom or usage, belongs to a long-past era. It is not the name but the *strength* of a Government which alone can count for anything in Europe to-day. National, Liberal or Socialist, it matters little if the people are as one behind it, and that, so they tell me on the Continent, is what the world is waiting for the British Empire to produce.

Alas, I can think of only one man who could rally the Empire round a single banner, but, by heavens! what a Power that would be!

His name is Edward, King of England.

* * *

In case you are not sure what "Popular Front" means, turn your eyes to Spain, where, as I write, it may be seen in all its bloody-handed horror, fostered and financed by power-seeking, Godless regicides from Moscow. Poor Spain! Poor, devout, easy-going, warm-hearted children of the sunshine; what a hunting ground for the suave, cold-blooded, gold-fisted agents of that festering corruption born of class-hate called Bolshevism!

Death dances the flamenco in the Ramblas where, left alone, all would be love and laughter. No more the happy lilt of a lightly-strung guitar comes stealing from the *fondas* to lovers walking hand in hand among the moonlit oleanders. The castanets of hell are playing, and the tune is called by Russian gold. *Adios, Juan!* *Adios, Juanita!* Keep your candles burning and all may yet be well.

* * *

I shall be abroad, I hope, for the month of September, so if you *must* write, for pity's sake don't get all *agitato* because you don't get a reply to your letter. If, of course, you can sheath the old stylo altogether for the time being, so much the better. No, I shall not be able to buy *pesetas* after all. Ah well . . . W.E.J.



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Coming soon—

MURDER BY AIR

NOTE.—Captain Johns has just finished a novel *BLUE BLOOD RUNS RED* which will be published in the early Autumn under the nom-de-plume John Earlie, to avoid confusion in the minds of those who associate Captain Johns with thrillers of the air, since the book is a modern comedy romance.

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DECEMBER 1938

THE NATIONAL AVIATION PAPER

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POPULAR FLYING

THE NATIONAL AVIATION JOURNAL

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Edited by W. E. JOHNS

THE EDITOR'S COCKPIT

ON PEACE IN OUR TIME . . .

AT the time the last issue of POPULAR FLYING was going to press the world was passing through a period of suspense the like of which has no parallel in history either for duration or intensity. No criminal ever awaited the outcome of a petition for reprieve more breathlessly than did the population of Western Europe the result of the eleventh-hour efforts to save civilisation from devastation. The crisis has passed, but the memory of it remains, so that citizens, fearing recurrence, go about their work with anxious faces, asking themselves—as well they might—What shall we do to be saved? Where did this appalling avalanche start? Where will it end?

LOOKING BACK

On and off during the past six years we have devoted a good deal of space to speculation on the event which has now come to pass. Were it not for the irritation the overworked phrase might provoke, I could dismiss the matter—justifiably, as old readers will agree—with those four hateful words, "I told you so." Not that there is any credit to be claimed for this. The danger was there for all to see. Most people saw it. Unfortunately, those whose business it was to take the necessary precautions did not see it. Or if they did they buried their heads, ostrich-like, in the sands of their commendable but out-of-date belief in British immunity from catastrophe.

We made this a subject for discussion because the matter involved (as it still involves) the vehicle with which we are most concerned. The aeroplane. A vehicle which, used as a weapon, a succession of short-sighted politicians, prompted by interests other than aviation, in spite of the fact that other nations were frantically developing their own, insisted on discarding.

If you trace the trouble to its source you will find

FRONTISPIECE

This is how we want them—what the met. people would call a "Hurricane warning." Not until we can put fleets like this into the air shall we be able to call our home our own. We need hardly say that this formation exists only in the imagination of our photographic department, who composed the picture from sub-units taken by Chas. E. Brown.

that the blame lies primarily on the shoulders of the Air Ministry. The Air Council saw the approaching storm clearly enough, but lacked the courage to cry "Beware!" in the face of a hostile Navy, a belligerent Treasury, and a lethargic Government. One can sympathise with them. For the most part, those in charge of affairs at the Air Ministry were dependent upon their pay for their livelihoods and they hesitated to take action which might have been interpreted as impacable behaviour by a truculent Treasury. So they remained quiescent.

Indeed, during the time I was associated with the Air Ministry it seemed to me that most people above the rank of squadron leader lived in fear and trembling of losing their job. A question in the House was sufficient to throw the Department concerned into such a state of dismay that it was a pathetic thing to watch. Be that as it may, it is beyond dispute that the Air Council toadied to a succession of incompetent Air Ministers who thought more about personal publicity than practical politics, and devoted what little energy they possessed to their Party rather than to the State.

In consequence of this the Air Estimates were cut to a figure which future historians will hesitate to quote in fear of error, so incredible will the truth appear. For this the Prime Minister of that time, and the Chancellor of the Exchequer, must be held responsible—unless we blame ourselves for choosing such a pathetic figure as Mr. Ramsay MacDonald (whose views on peace and war are well known) to lead the country at a time when a man was needed.

Turning back to the issue of POPULAR FLYING for May, 1933, when we were discussing this question of reduction of the Air Arm, I find these words:—

"It may be no exaggeration to say that the fate of the British Empire is in the hands of Mr. Ramsay MacDonald and Sir John Simon. If they put into practice what they have in mind" (the further reduction of the Air Force) "they must be prepared to shoulder the blame for the inevitable result."

That result is now beginning to emerge.

Following these initial blunderers we were afflicted with a succession of Air Ministers whose lack of vision

will be a cause of speculation to future writers when dealing with this period of time. To make their task easier let us say here that few of them knew anything about aviation. They knew nothing of flying, little of arms, and less of bomb warfare. Otherwise, with a contumacious Germany building aircraft (and other armaments) at feverish speed, how could they have ignored a sign so plain?

You may remember one Air Minister—Lord Londonderry. Right through the crisis, certain words he uttered not so long ago rang through my head like a funeral peroration at a graveside. They were reproduced on this page at the time. Permit me to remind you—and him.

"To those who are crying out for a vast armament of aeroplanes immediately I would ask, to what purpose are they to be put, and for what immediate crisis are they intended? . . . We obviously have no need for an enormous fleet of aeroplanes of this kind now."

In our reply, we—as being among those who were crying out for a "vast armament of aeroplanes"—endeavoured to point out (with some asperity) for what crisis they *were* intended. We quoted Germany's air strength, and supported this by production figures, figures from authentic sources which have since been proved correct in detail. It is just possible that my Lord Londonderry has now perceived the crisis for which those aeroplanes were intended.

But little purpose can be served by these recriminations. Let us forget the past and turn to the future. But before doing so, I would like to mention one aspect of the recent affair which few people—the Government least of all—appeared to take into consideration; and that is, the psychological effect of a moral victory on a dictator of Hitler's type. Its importance cannot be over-emphasised, for in it lies the greatest menace of all.

INTERVAL FOR REFLECTION

An examination of your history book will reveal that the world has been afflicted by more than one dictator, and a short survey of the careers of these men, which are singularly alike, shows that their progress is analogous to a snowball set rolling down a hill. As it proceeds along its allotted course the accumulation of more material accelerates its progress until at last it reaches dimensions, and a rate of progress, unsuspected at the summit. Alexander (he whom Caesar tried to emulate, and first dubbed Magnus) provides us with a typical example.

He started in a small way, and nobody would have been more surprised than he could he have been vouch-

safed a vision of the future. This Macedonian prince (a barbarian, according to contemporary status) was inspired to rid his country of Greek influence. At the time this must have seemed the very limit of ambition, but having succeeded he passed on quickly to the conquest of Greece itself. This done, he planned a pan-Corinthian League, in order to safeguard which he decided to emancipate the Greek colonists in Asia Minor and Egypt, then labouring under the yoke of mighty,

imperious Persia. This indeed must have seemed the height of pure ambition.

But no sooner was this accomplished than he staggered his generals by announcing his intention of starting a campaign against the apparently invincible power of the far-flung Persian Empire. Darius, King of Persia, to evade war offered him colonies—money. But in vain. Alexander conquered Persia, and this must have seemed the end. But not for Alexander. Now crazy with success he marched east instead of west, carrying all before him with an impetuous egotism which knew nothing of defeat. India, until then only a name, was the next to fall, and the world was Alexander's. Here was a dictator indeed. He was no longer a man in his own estimation. He had become a god. And those of you who may count on the time factor for deliverance would do well to recall that at the age of thirty-two Alexander was dead. In a mere twelve years he had

conquered the world by force of arms. Yet he had no trains, no mechanical transport; his fastest means of communication was a horseman.

The point I have tried to make is the manner in which his ambition grew with each success. Within ten years his original objectives, stupendous at the time, had become minor incidents of no account. Thus has it ever been with dictators, and so will it be with Hitler unless his progress is arrested.

We may as well finish the story. What no man could do, what no nation in the world could do, not even the mighty Persian host or the teeming hordes of India, was in the end achieved by so small a thing as a mosquito. What bitter irony! A sting from a microscopic instrument. Fever resulted. Alexander the Invincible, master of the world, scarred by a thousand wounds, lay down and died. And now mark the flimsy foundations upon which such empires rest, and read the lesson. Almost before the death rattle in Alexander's throat had died away, his world-empire had collapsed like a sand-castle struck by a tidal



He Holds the Baby.

Lord Londonderry: "To those who are crying out for a vast armament of aeroplanes immediately I would ask . . ." He is now chief Civil Air Guard Commissioner.

wave. The truth was, the edifice rested on the single stone of Alexander's personality. That has always been the weakness of dictatorships. When Hitler falls, no matter how great the pan-Germanic empire (which doubtless he now visualises) may have grown, it will fall with him. And so the million lives that he will lose in its making will have been lost in vain. Time marches on.

A.R.P.

The tragedy of it is, the lives that Hitler will one day lose will not only be those of soldiers. We have long suspected it. Now we know it. I have just been looking through the A.R.P. Handbook, and from the amount of space devoted to mustard gas it seems certain that this appalling method of inflicting death (one cannot call it a weapon) will be used. Can those of you who have seen the effects of mustard gas imagine anything more inhuman than its employment against women and children. One can only say, if this is civilisation, for God's sake let us have barbarity.

AND NOW?

As far as one can judge there is only one way in which we as a nation, and as individuals, can save ourselves from this appalling ordeal. It is aeroplanes. Bombers, and still more bombers, with thousands of interceptors to guard our coasts. Parity is not enough. If Germany has five thousand bombers, then we must have ten thousand. For every blow that Hitler can strike we must be able to strike two in return. This is the only argument dictators understand. With efficient organisation of the men and material at our disposal we can do it. Given the aeroplanes, there will be no shortage of men to fly them. Every fit man in the country should be taught to fly. A war plane should be at his disposal. We have the men. We have the money and materials to build the aeroplanes. And, what is even more important, we have the fuel to put in their tanks to make them fly. Which is something Hitler hasn't got—as yet. He has his store, but he has no reserves. What he has will be gone in a flash if he has to put ten thousand machines in the sky to meet our own. He may have gained something by his recent bloodless conquest, but we still hold the cards, and if our leaders can play them properly the dreadful game into which we are being forced will be ours.

But make no mistake. The slovenly methods of the

last decade will not see us through. If they persist, your children's children will grow up able to speak one language only—German. Never mind German colonies. Nothing less than world domination has ever been the ultimate goal of a dictator. It would not end there if he could reach the stars. So it will be with Hitler unless we have preponderance in the one weapon that can stop him. Aeroplanes. Not by the hundred or by the thousand, but by tens of thousands. Within five years the income tax will be ten shillings in the pound. No matter. Better that than the fate that now stares us in the face. So go to it, all of you, and by word and deed do what you can to make the Empire air-wise and air-powerful; for in the mastery of the air alone lies our only hope of salvation.

UP GUARDS . . . !

When the Air Guard scheme was launched I thought that there was something familiar about it. Turning back through some early issues of P.F. the other day, I came upon this—

"They (the Government) are talking now of disarmament, with an eye on the Royal Air Force, and they are talking of economy with an eye on aviation . . . By these means it is hoped to effect two things; to prevent war, or use of aircraft in war, and to reduce expenditure. It will do neither. On the contrary it will expedite war, and when that war comes any economies effected now will be paid for with ten thousand per cent. interest . . .

"Presently somebody will pull our nose severely . . . Then the trouble will start. There will be a wild rush to build aeroplanes and, what would be more difficult, to teach men to fly them. In the rush to 'launch' new pilots they will kill ten men a week and with them write off ten machines costing anything up to £25,000 apiece. Is that economy?

"If the authorities want to practise economy they should start to teach 5,000 young men to fly at the schools and clubs now, while it can be done quietly, sanely, efficiently, cheaply, and, above all, safely. Naturally, they will have to join the Reserve as part of the undertaking. It is only a short step from light planes to service machines. This would allow the fellows who learn to fly an opportunity of putting in a little flying time instead of being sent solo after ten hours, to fight professional war flyers with 5,000 hours . . ."

It is a pity that the demand for prophets has fizzled out, or I could hawk this round as a sort of testimonial as to my ability for a job in the Ministry of Prophecy. Where I broke down was the bit about killing ten pilots a week, in which respect I was guilty of over-estimation. As it turns out it is only a mere eight or nine.

W. E. J.



What does he think about it? No, not the Prime Minister, but Mr. C. P. Robertson (left, side face), who, as head of the Air Ministry, Press Section, has for twenty years weathered the stormy waters between the Scylla of Kingsway and the Charybdis of Fleet Street. Always in the picture (but seldom in the photo), we take this rare opportunity of presenting one of the most popular officials in the Air House.

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THE NATIONAL AVIATION JOURNAL

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JANUARY, 1939

Edited by W. E. JOHNS

THE EDITOR'S COCKPIT

THIS INTERCEPTOR HUMBUG

THE trouble with that once eminently respectable old gentleman named John Bull is that he is going—in modern society parlance—pansy. In his dotage he is becoming a simpering cissy, a lily-fingered lounge-lizard ready to philander with any shandy-sipping adolescent who happens to come along. The aggressive-looking bulldog that once marched confidently at his heels with tail erect has degenerated into a yapping, spoon-fed pom, ready to cower at the yelp of every mongrel pup. It is time they both went off their diet of rusks and raspberries and got back to the beef and beer on which they were reared. And if instead of spending his time in cheap Continental beauty parlours trying to soft-soap the old gunpowder tattoo marks off his chest, the Old Man made them a bit brighter with a dressing of tiger's blood, or old soldier's spit, people would sometimes listen to him when he speaks—always assuming, of course, that his tone of voice is in keeping with his size, and less like that of a Soho waiter. At least, that's how it seems to me.

And that, judging by my correspondence, is how it seems to a lot of people. Is it surprising? Our wise masters of Westminster can't have it both ways. There must still be alive in this country to-day a million men who, twenty years ago, were given an intensive course of rough-stuff, the object being to inculcate into them what was called—for want of a better name—The Fighting Spirit. Into the hands of these men was placed some eighteen inches of sharpened steel stuck on the end of a gun, after which they were invited to hurl themselves with bestial ferocity upon a sack of straw suspended from a gibbet. This sack, of course, represented an enemy, and the faster you could split it from the duodenum to uvula, by "long point," "short point," or "jab," the

broader were the smiles of those who devised this genteel pleasantry. This, then, was the Fighting Spirit. When a human battery was sufficiently charged with it he was sent off to a theatre of war, theoretically to discharge himself, but more often to find that there is a world of difference between a sackful of straw and a skinful of meat.

Most of these old batteries have nearly run down by now. But not quite. In many of them still lingers a last spark, and it is this spark that is buzzing with indignant resentment as poor old John Bull takes kick after kick in the pants without so much as a whimper of protest. Lord! Why, even in my time I can remember how the Old Boy used to stride down the middle of the road with an ash stick under his arm and never a word of explanation or apology to anybody. Once in a while he would pause for a moment to slash the head off some stinking polecat—that was all. Other pedestrians on the same road just put him down as a funny-tempered old stiff—and kept outside the radius of the stick. To-day he dodders along the path with the stick hidden in the leg of his trousers while urchins march arm in arm down the road singing the popular ditty, "A tisket, a tasket . . ."

Must we endure this indefinitely? Don't tell me such a thing. Rather than that let us put the Old Boy out of his misery by bumping him under the next tank that comes along.

Defence—defence—defence. All I hear by day, all I read on the printed page issued by the Government, is defence—defence—defence. Stap me, gentlemen, the word grows monotonous. We don't want to attack anybody; all the world knows that; why make a song about it; why keep on about it? It has come to a pretty pass if our new boast is to be that we will defend ourselves. That puts us on the level of a rat in a trap. I'm no Ben Hur, but this rat complex on top of a basket of Italian raspberries, and a bagful of Czecho-Slovakian

FRONTISPIECE

Pilots of the German Air Force, reading what? Is it a recipe for appeasement pudding or seasonable suggestions for basting the Imperial goose?

Dawn, as seen by the air pilot or traveller.

acid drops, is beginning to make my mouth taste as if I was sucking a mouldy penny. There is a limit to the amount of appeasement pudding self-respecting men can have shoved down their throats without being sick.

The idea is, we must not say anything or do anything that is likely to hurt anybody's feelings. Well, that never got anybody anywhere, and if the British Government is going to bet on that horse the money is as good as in the bookie's satchel. The latest phase, and (as you will have guessed) the one that has moved me to this unseemly incoherence, is our new interceptor policy. By this incredible brain-wave it is hoped to prove our policy of peace at any price. After what has happened during the last few months that doesn't need any proving. We will, we say, merely endeavour to prevent ourselves from being destroyed by anyone who cares to have a crack at us. In other words, the "parfait knight" puts on his armour when he goes out and leaves his weapons in the garage. Pretty good. If this armour would keep the sword points out I wouldn't be so upset about it. But it won't. Every pilot who has ever fought in an aeroplane knows that it won't. What does their opinion count for? Nothing!

You know, for a long time I held the view that if there was no such thing as a Secretary of State for Air it would not make the slightest difference to anybody—except, possibly, the Chancellor of the Exchequer, who would save so much on his pay-roll. But I was wrong. Definitely wrong. I can see now that if we had no Secretary of State for Air our air policy would, on the principle of heads and tails, sometimes be right. While we have one we must, it seems, always be floundering about in the overcast. Look at any other nation you like and you will see an Air Minister who does at least know which end of an aeroplane goes first. Most of them got their jobs because their business for many years has been in aviation. In the totalitarian States those who run aviation learned it in the cockpit of an aeroplane. And if you will reflect on that for a while you will perceive why we are so often up salt creek without a paddle. With us, it doesn't matter whether the Air Minister



knows anything about flying or not; it is all O.K. as long as he says the Government is always right. Well, you'll see where that will get us in the end.

I am not going to analyse this old question of interceptor versus bomber. It has been done in these pages so many times. But I will say this. While the ratio of things that matter between bomber and fighter remain as they do—and it has always been fairly constant—fighters will not stop bombers. They never have stopped bombers. Nothing will stop determined bombers. *Nothing*. Not guns, nor balloons, nor interceptors, or anything else. When somebody produces a ray capable of cutting the ignition of a petrol motor it may be a different story; and while several people are, I believe, experimenting with such a device, success has yet to be officially announced.

The Government is wrong at the very onset. In spite of the lessons of the last war, when six bombers could, and did, fight their way daily through scores of interceptors over hundreds of miles of hostile country, the



Government still persists in treating the bomber as a weapon of offence. I have said it on this page scores of times, and I'll say it just once more; there is only one defence against bombers, and that is more bombers. Of course, it doesn't matter what I say; I'm only a poor perishing flying officer bomber pilot; but if the Government needs to be convinced they have only to go to the men whom they pay to do the job, men who learned their lessons in the field, men who have *done* the job—fellows like Gray, Silly, Baldwin (not the ex-Prime Minister—he doesn't know anything about it), Quinell, Patterson.

I haven't seen these officers for years, but I'd stake my delphiniums that if they haven't had the faculty for plain speaking squeezed out of them by the Air Ministry mangle they would confirm that there is no way of stopping bombers when those same bombers have made up their minds to go places. They would do more. They would, at a pinch, take a formation of bombers to any objective within the endurance of their aircraft—

and get there. They might lose men coming home. But that wouldn't stop the bombs from falling on the objective.

On active service I have never heard of a formation of efficient bombers turning back, even when the odds were against them. I have, it is true, known a leader to change his objective on account of weather conditions; but that was plain common sense. I should be a fool to pretend that bombers will have an easy job in the next war. They will not. They will have to fly through hell and back; but they will get there. And that is the point at issue.

Bombers are raiding Barcelona. If these raids could be stopped by interceptors they would be stopped; for do not suppose that the Republican Government has no interceptors. It has some of the latest Russian interceptor equipment. Just how good or bad that is only our Intelligence people may know, unless the rumour about a very mercenary mercenary flying one over here is a lie. But that is neither here nor there.

Or is it?

If the Government really wants to know how far it is possible to stop bombers they have only to look at the shambles that was Spain and China and Abyssinia. But one could not blame them for not looking. It isn't pretty. I haven't been there, but I have seen some of it on the French newsreels.

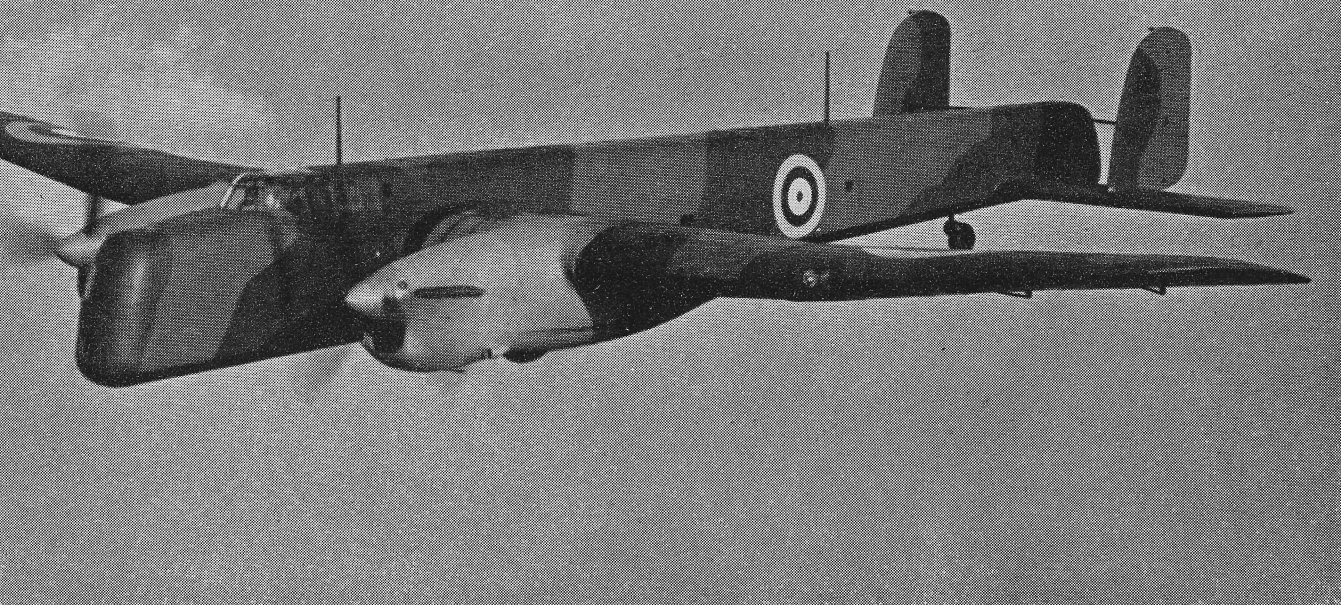
It all boils down to this. If to-day Great Britain had five thousand efficient bombers it would need no balloons and fewer anti-aircraft guns. So we're going to build interceptors. That's fine.

A long line of bombers would save the Secretary of State for Air a lot of time inspecting things he knows nothing about, and the various units which now stand to all day on the occasions of these inspections could then get on with something useful. How long must we persist in the footling humbug? But there, what's the use of talking?

Never mind. With the proposed abolition of capital punishment and pretty names for crooks the Government is at last making "a land safe for criminals to live in." What a joke! Shades of St. George, what a joke!

Now let's go and have another helping of overdone appeasement pie.

W. E. J.



An Armstrong Whitworth Whitley fitted with two Rolls-Royce Merlins for experimental purposes.

BOMBERS BEFORE FIGHTERS

Observations on a topical matter of importance

By

NIGEL TANGYE

DURING the last phase of Allenby's advance on Palestine in September, 1918, enemy activity in the air was completely stifled by the maintenance of continuous patrols by British aircraft equipped with bombs over the enemy aerodromes. Such aerodromes that lay to a depth of 100 miles behind the lines were covered in this way.

The pilots in the patrolling aircraft effectively prevented enemy aircraft getting into the air by bombing and machine-gunning them as soon as they put their noses outside a hangar. The machines used for this work were not only bombers, but fighters as well, and, in fact, anything that could fly and carry a bomb load of some description.

The moral of this tale is that Allenby did not wait for the enemy aircraft to be intercepted in the air before they were attacked. He pounced upon them by bombing before they could get in the air. These tactics, which were nothing more than the pursuance of the old adages "attack is the best form of defence" or "take the fight into the enemy's camp," were eminently successful, and they merely added to the long list of engagements which have been likewise successful in history.

It is therefore surprising and not a little disturbing to find the Air Minister rejecting entirely the lessons of history and, indeed, commonsense, by publicly announcing that productive effort on the defensive fighter was to be given priority over that on the offensive bomber.

In the House of Commons on November 10th last, he said: "I propose to give the highest

priority to the strengthening of the fighter force, that force which is designed to meet the invading bomber in the air. It is upon this fighter force that we shall rely, together with our anti-aircraft equipment operating from the ground, to deal directly with the bomber if he ever comes. In this connection there will be a substantial and progressive increase in our first-line strength, amounting to 30 per cent. over the programme now authorised."

Sir Kingsley Wood went on to say: "A measure of this strengthening of our close fighter defences may be indicated by saying that to provide the necessary first-line aircraft, the reserves required to enable the force to continue to fight at full strength, the aircraft required to train the crews and pilots and those required to meet wastage and re-equipment, the number of fighter aircraft now on order or to be ordered under the new proposals will amount to between 5,000 and 6,000 aircraft."

Let us consider if there may be some reason for this statement overriding the fact that it means that the Air Minister rejects the benefits of attack and destruction of key points in favour of purely defensive measures over home territory. For in effect the first part of the Air Minister's announcement is the same as if the War Minister were to announce that he was in future going

to give highest priority to the production of bayonets and that the production of guns was to be only a secondary consideration because it was on the bayonet that our defence ultimately depended in the event of the enemy making an attack.

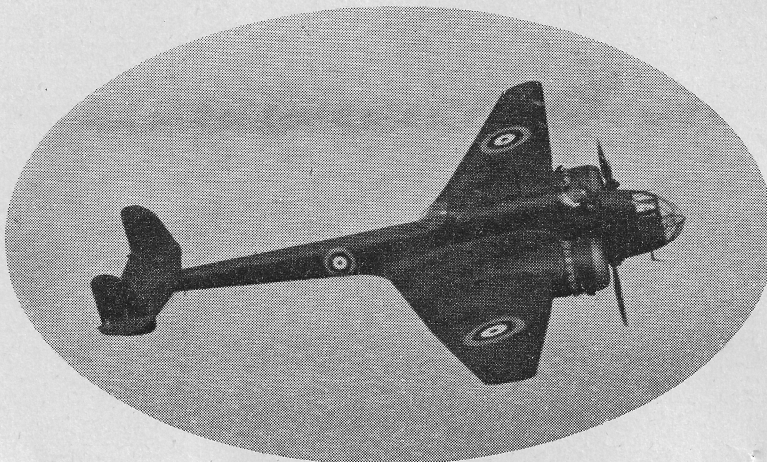
There is a semblance of justification for this change in policy if one believes political considerations to be more important than practical. By announcing to the world that we were building fighters in preference to bombers it presumably shows our non-aggressive attitude. At the same time it might serve as a blind (quite transparent to all but the politician) to show that our defensive equipment was such that no attack by an enemy would be worth his while. Another reason that might hold water with the politician is that the production of fighters rather than bombers enables us to increase our first-line strength at less than half the cost it would be if we built bombers instead of fighters; and as first-line strength means nothing to the tactician and technician but everything to the politician in assessing the aerial might of Powers, one can see that from the latter's point of view the policy has an economic advantage. From the time when Air Arms came into being, first-line strength has been the yardstick by which politicians have gauged relative strengths in the air. With astonishing

naïveté they have been satisfied that it conveys a true estimate of a country's strength in the air. In actual fact, of course, it means precisely nothing. Before one can gauge the strength of an Air Force one must know the production potential of the country, the reserves of personnel and material, and the types of machines which form the so-called first-line strength.

For the life of me I cannot find any other reasons that may serve as justification for the Air Minister's announcement. Even the extent to which he intends to increase the fighter force is misleading. His statement was so phrased that it led people to think that we were ordering between five and six thousand new fighters additional to our proposed

first-line strength in them. More than one paper came out with headlines to that effect. What does it really mean?

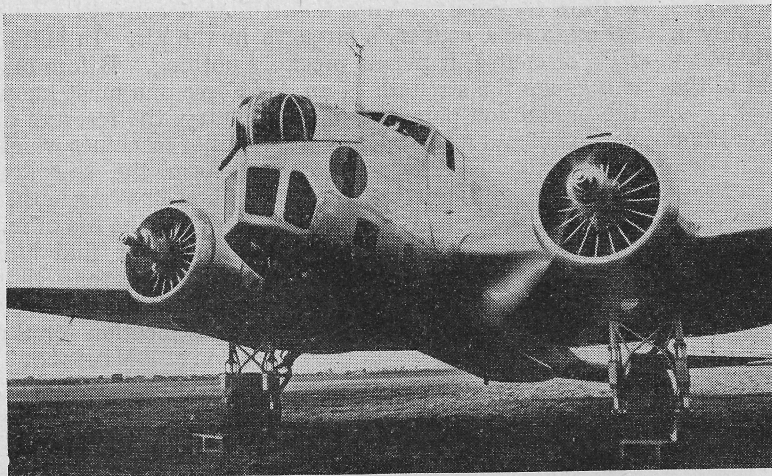
Included in that figure of between five and six thousand are "aircraft required to train the pilots and crews" and "reserves required to enable the force to continue to fight at full strength ... and those required to meet wastage and re-equipment." By the time you have allowed for all that (very necessary allowances, I do not dispute) the new fighters that will find their way to regular squadrons will not number more than a couple of thousand. Yet to provide for this



The unorthodox-looking Handley Page Hampden which is now in quantity production.



The Vickers Supermarine Spitfire, large numbers of which type it is hoped will provide an adequate defence against raiders.



The Fiat B.R.20, an all-metal bomber which is said to be able to average a speed of 300 m.p.h. over a range of 1600 miles.

inadequate number, production effort on bombers is to be given second place.

The fighter is inevitably an unsatisfactory weapon of defence. We use it because under ideal conditions it can do its work pretty thoroughly. But those ideal conditions turn up only on rare occasions so that the fighter can only be considered as a luxury, as a weapon to be provided only after other, more continuously efficient, weapons have been provided. After all, assuming we do not intend to undertake any aggressive action (a true assumption), our Army, Navy and Air Force are only in being to counter acts of aggression and their weapons should be fashioned toward this aim. But that does not mean that the best way of defending Great Britain is necessarily to wait for the enemy to bring the war within our own boundaries and to fight a purely defensive war. The Navy, for instance, does not just sit around our coasts in war-time ready to shoot at any enemy ship that comes within range. It goes out and attacks him by blockade. The effect of blockade is not immediately apparent. It takes some time. But without the supply of materials getting through the enemy will ultimately starve, and before it is actually starved it is undertaking war under increasingly difficult conditions. All that is obvious.

In just the same way, the Royal Air Force will not be doing its duty if, to take an extreme case, all its machines

are fighters whose duty was to bring down as many enemy raiders as possible. No purely defensive tactics such as that ever won a war. Its power would be immeasurably more effective if it carried out offensive tactics in the form of raids on aircraft factories and enemy aerodromes. If these were successful the enemy would be swept from the air because of the collapse of its source of supply.

Even assuming our defensive weapons such as fighters, anti-aircraft guns, balloon barrages, were one hundred per cent. effective, we might still suffer from enemy attentions until we cut off their source of supply. So it is apparent that it is better that we should first equip our Air Force with machines which will attack these enemy sources of supply before diverting effort toward the production of purely defensive weapons.

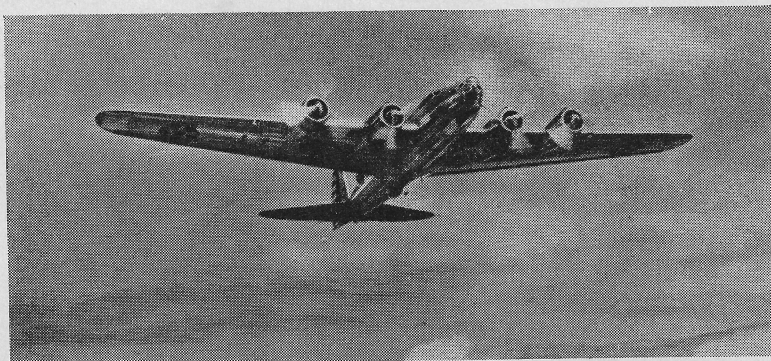
It is not that these defensive weapons are even effective. The balloon barrage is the only weapon that can operate effectively in cloudy weather. For the gunners to shoot down enemy raiders they have first to be able to see them. Similarly, the fighter pilot has also to be able to see them and then contact them, a mighty difficult task when you think of a 300 mile-an-hour bomber streaking through the night somewhere within a depth of air of 20,000 feet or more.

In the last war fighters as a means of defence over London were surprisingly ineffective. True, modern guns are more accurate and modern searchlights more powerful, but against those advantages you must set the insuperable disadvantage that the preponderance of speed of the fighter over the bomber has been reduced from the fifty per cent. of 1918 to about fifteen per cent. It is just three times more difficult for a fighter to get within range of a bomber now.

But let us see how effective fighters were in the defence of London from the Gotha raids of June, 1917, to May, 1918. Air-Commodore L. E. O. Charlton provides the following figures in "The Air Defence of Great Britain":

During this period there were twenty-eight raids, consisting of eight by day and twenty by night. The total number of enemy aircraft engaged on these raids was 369, making an average of thirteen per raid. The Home Defence Fighter Squadrons had 200 machines at their disposal. Most of these were Camels, one of the best types of fighter of the period. In addition, there were an effective system of listening posts, 294 anti-aircraft guns, 415 searchlights and 114 height-finders. For the purpose of air combat an aggregate of 1,568 Home Defence aircraft rose to meet the raiders, making an average of fifty-six per raid against the enemy's thirteen. Yet, in spite of this great superiority in numbers, the fighters were only successful in bringing down eight enemy machines. Anti-aircraft fire brought down another thirteen.

(Continued on page 523)



The U.S. Army Air Corps puts its faith in large bombers. Most publicised is the Boeing B-17, shown above.

BOMBERS BEFORE FIGHTERS—(*Cont. from p. 490*)

Against this purely practical result one must set the psychological deterrent afforded by the fighters. For this reason it is obviously necessary to maintain a fighter force. But as far as practical results are concerned, one cannot set much store by the fighter being responsible for bringing the enemy to his knees.

It is particularly difficult for fighters in this country to operate successfully because of the large proportion of days when the sky is overcast. Invading bombers, with the modern technique of blind-flying, will take full advantage of these conditions and will only come out of the clouds for extremely short periods, just long enough to determine their position. It is only during these periods that our fighters will be able to see and attack them; and as soon as they see a fighter approaching they will, of course, return to the clouds and once more become invisible. Bombers pursuing these tactics will be able to avoid combat no matter how many thousands of fighters are pitted against them, and it is inconceivable that there should be enough fighters to cover every place from whence the bombers might show their noses. The bomber will be in the position of an invisible man making his way through the enemy lines. A million troops would not be able to stop him getting through.

Many readers will have undergone a blind-flying course and will be familiar with the cross-country exercise that forms part of it. In this exercise the pupil has to fly a pre-determined triangular course "under the hood." From the time of leaving the aerodrome he is not allowed to see anything but his instruments until he has flown round the triangle of some hundred or so miles. For safety's sake his instructor goes with him and notes how far out the pupil is at his turning points. But the point is this. Purely by flying along his courses previously calculated with reference to estimated wind strength and direction, the pupil, in nine cases out of ten, estimates that he is back over the aerodrome when he had made a error of only three or four miles; and that after an hour's flight.

Invading bombers will pursue these tactics. They will approach over the coast on a course that will confuse the listening posts into thinking that, for instance, the machines they cannot see in the clouds are on their way to the Midlands when in reality they are going to bomb London approaching from an unexpected direction. The bombers will make three alterations of course over pre-determined points, creeping below the clouds just long enough to check their position at their turning points. And again they will fly below the clouds for the comparatively brief moment necessary to steer on to their target and release their bombs.

Our fighters will have great difficulty in engaging machines pursuing these tactics. Nor will enemy fighters have a better chance to engage our own bombers. Everything is in favour of the attacker in air warfare. Let us, then, concentrate on building a mighty bomber fleet before diverting effort toward the equipment of a mighty fighter force.

No country will make war on another which has an overwhelming bomber fleet for fear of the reprisals and the destruction that such aggression will court. But no amount of fighters will deter an enemy from attacking if it knows that there is a weak bomber fleet against it. It will be able to destroy and destroy again, and itself never be destroyed.

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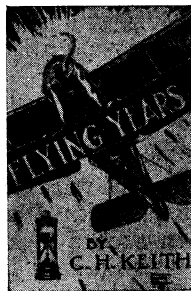
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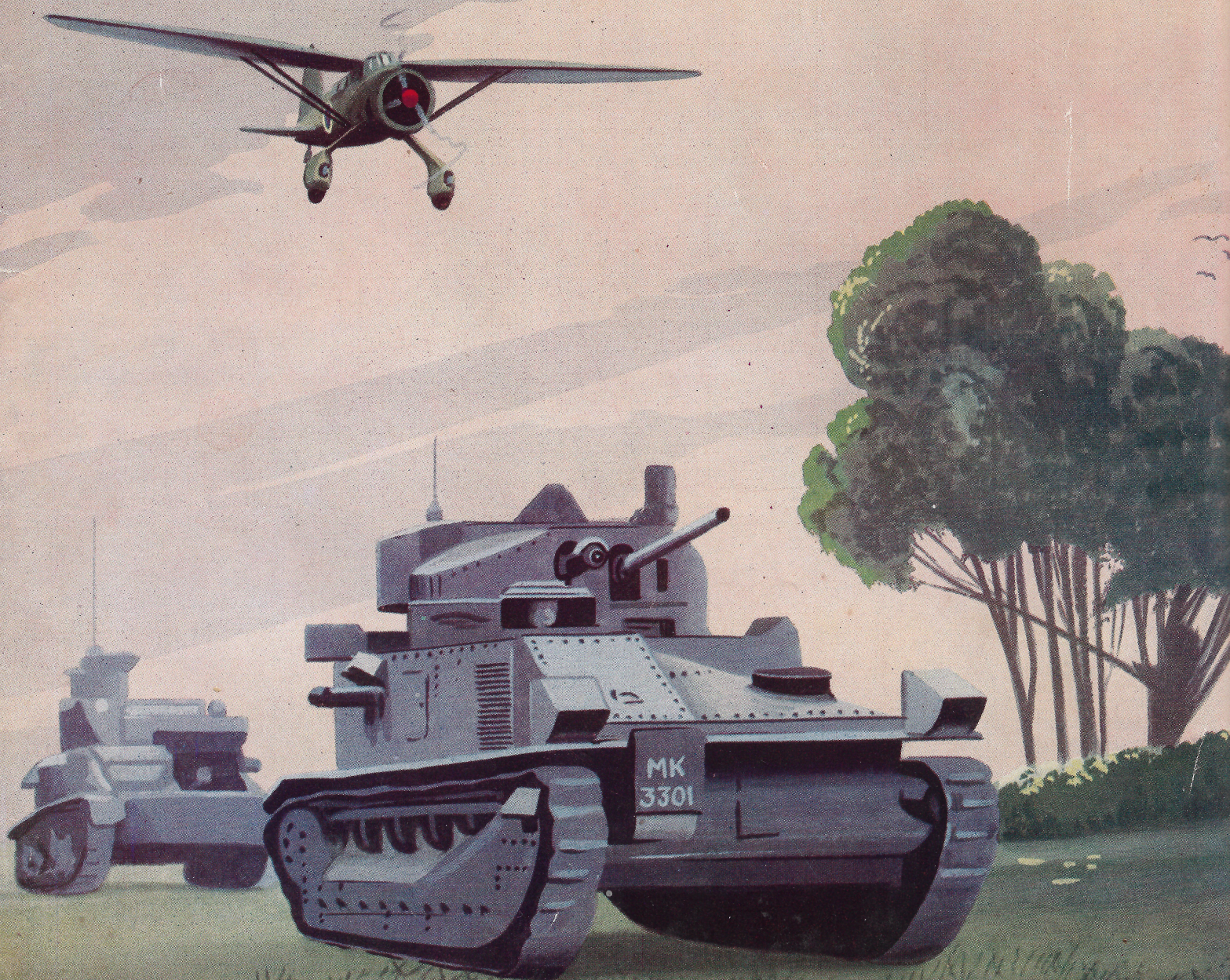
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MAY 1939

THE NATIONAL AVIATION PAPER

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POPULAR FLYING

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Edited by W. E. JOHNS

THE EDITOR'S COCKPIT

WHATEVER certain daily newspapers may say to the contrary it becomes increasingly obvious that the periodical seizure by Germany of weaker States can only end in war—unless, of course, Hitler realises that the old Lion is on his feet with a new set of claws, and it might be unwise to goad him further. That it was the absence of claws which encouraged Hitler to go as far as he has is not to be doubted.

It has been my fortunate fate—or unfortunate, as I sometimes think—to see from close range the “moving finger writing” this unhappy passage of our history. Those of you who have read this paper from its inception must know the story fairly well, for I have referred to it in part more than once; indeed, I think I may be forgiven if I claim to have stated fairly accurately what the future held. If anyone questions that, let him read the Editorials of POPULAR FLYING from number one up to last summer, when, before a word of crisis had been mentioned, I hinted what was coming “after the harvest was up.”

How did it all come about? For the benefit of new readers (and for the last time) I will run briefly and broadly over the events which caused the greatest Empire in the world to wash down with the unpalatable water of humiliation such humble pie as no Britisher from Henry Tudor to Victoria would have believed possible. Because—and I think few will dispute this—the major factor, the very backbone of the whole situation, has been, and still is, the vehicle with which we are most concerned—the aeroplane. Or perhaps we had better say, the threat of wholesale destruction from the air. The Londoner no longer regards war as did his father; what it means to him is the bombardment of his home.

The events for which we are now paying such a grim price began in about the year 1924 or 1925. I do not keep a diary so I cannot give the exact date. And, strangely enough, it was in our greatest strength that our greatest weakness lay. The Royal Navy—or rather, the Power that lies behind that honourable and august Service. Do not misunderstand me. I do not refer to the men who man the ships. They are, thank God, as true as British seamen ever were, or we should be in evil case indeed. But behind them is what for want of a better name I will call a Power. Its chief component is Capital, for the building of major ships is Big Business.

At the time of which I am speaking the profits of building aeroplanes were mere bird-seed.

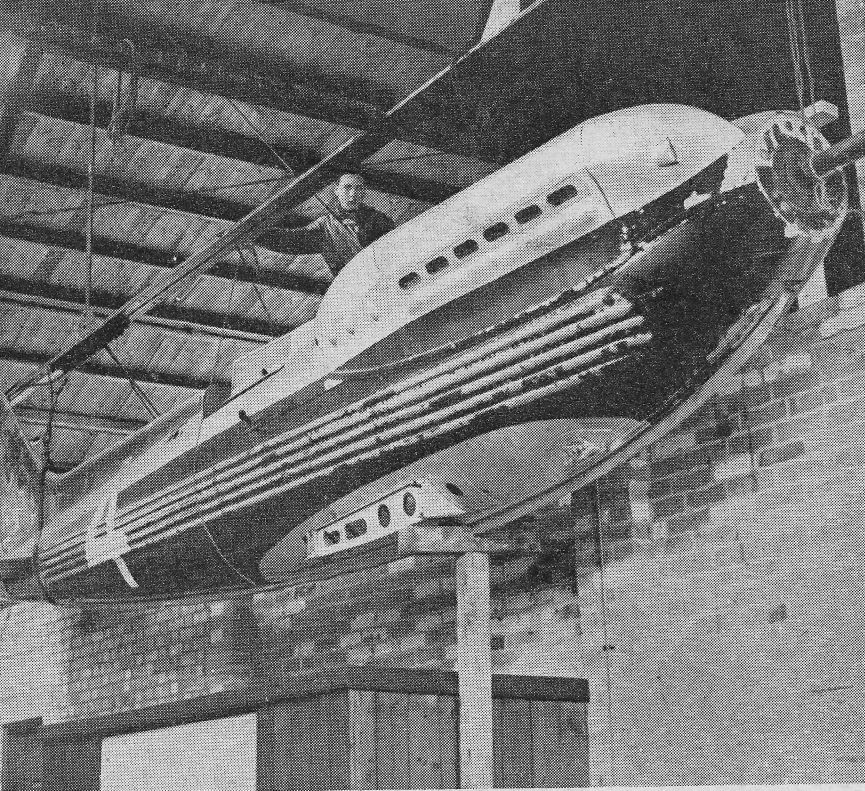
The trouble started at the first real Fleet Air Operations. (I cannot prove a word of what I am now going to say, nor, for obvious reasons, could I expect a single serving officer to come forward to support me; but it is true.) At those operations the predominance of aircraft over capital ships as they were then constructed and equipped was proved so conclusively that even the pilots who took part in those operations were not a little astonished. Not seeing what lay ahead, some of them laughed. I heard them. But the Power behind the Navy was not only astonished; it was shaken. It was more than that. It was staggered. But it acted promptly, for it realised that if the truth became known, that sea-power had, in fact, become secondary to air-power, it would damage them in more ways than one. So orders were swiftly promulgated to those airmen who had taken part in the operations that they were on no account to mention what had happened. I do not know for certain, but in my mind I have little doubt whence that order originated; and the Air Council, being weak—or, shall we say, not having a Power to back them?—complied. When the Press stories came out on the operations, no one in the Air Service was surprised to discover that they bore no resemblance whatever to the facts. Remember, I was in the Service at that time, and I remember well the indignant discussions in the ante-room. The Press could not be blamed for this. They could only print what they were told. And the same story, no doubt, was told to the Government. The result was, the Air Estimates were reduced, the money that should have gone to the Air Force going to the Admiralty. But this was only the beginning.

The Admiralty, knowing the truth, began forthwith such a campaign to get control of the Air Force that only those who know the truth have any idea of the social, political and financial machinations employed. In the light of subsequent events it was a pity that they did not succeed in their object right away, for then more money would have been available for aeroplanes; in which case it is likely that Czecho-Slovakia would still be a State to-day. As it was, part of the “enemy” programme was to reduce the Air Force to a Service so small, so inconsequential, that it would not be worth maintaining as a separate Service, but should be divided between the Navy and the Army—the major part, of course, going to the Navy. This measure was, in fact, pressed time and time again.

Now in all the Air Ministry, the only man who fought, and by fighting saved the Air Force as a Service, was

FRONTISPIECE

A stern view of the “Ark Royal,” the first British aircraft carrier to be built solely for that purpose. With her complement of 1,550 officers and men, she carries the largest personnel of any ship in the Navy. She can accommodate about 70 aircraft in her hangars.



The father of the modern fighter. Several readers have asked us from time to time what has become of those proud Supermarine Rolls-Royce seaplanes which were so much in the public eye in connection with the Schneider Trophy contest. Here is one of them, with her blue and silver paint peeling off, hanging up in a make-shift fire-station at Southampton Airport. This machine was disqualified in the 1929 race for a faulty turn, but subsequently set up a world's speed record of 331.75 m.p.h.

into it out of the tax-payers' pockets. But the most amazing, the most *incredible* part of the scandalous state of affairs is yet to come.

Hitler came into power, and forthwith started on his colossal programme of air expansion. And it is my belief that it was the very weakness of Great Britain in this respect that induced him to do it. *He* knew the value of aircraft—or if he did not then his ex-Flying Ministers told him. So he started building aeroplanes on

Lord "Boom" Trenchard. To the "enemy" he was a pillar of strength that could not be pulled down, although every possible means was employed to drag him out of the Chair of the Chief of the Air Staff. Nevertheless, to such an incredible pass did things come, that in about 1927 (again I am speaking from memory, although I was still in the Service) Lord Trenchard took a step possibly without precedent in the history of a British fighting service. He called together, at Uxbridge, all the officers of the Royal Air Force on home stations above the rank of Flight-Lieutenant, and in a speech explained to them as far as he dare what was afoot. I believe Squadron Leaders and higher ranks attended this meeting. I was myself at Uxbridge at the time, but I was only a Flying Officer, and although my information was that the officers present were addressed in secrecy, rumour of what it was about leaked out—as it was bound to. I say again, frankly, that my information on this extraordinary proceeding is second-hand. I do not know what was said. But I know what it was about. I only mention it to give you an idea of the weight of pressure that was being applied to the Marshal of the Royal Air Force to break the Air Force into pieces. My reaction at that time was merely one of indignation, as it must have been with every other officer who knew the scandalous facts. But Hitler had not yet come into power so there was no real menace to face; but the Air Force had dwindled—nay, was being deliberately cut—to a dangerously low level.

Soon after that I left the Service, so what I saw afterwards was from the outside, but the questions being asked in the House told me that the war for the dismemberment of the Royal Air Force was still proceeding. There is no need for me to dwell on the next few years. The records are available for anyone to see. The Air Force estimates were cut still lower. The Air Ministry was filled with Admiralty agents. From a minor department Finance grew to be an octopus whose ever-grooping tentacles sought to squeeze the last drop of blood out of the fast-expiring Service, in order that its corpse could be tossed to the Admiralty—when the Power behind it would doubtless have pumped new life

a scale hitherto undreamed of. The British aircraft industry was still getting orders for single types, threes, sixes, or perhaps a dozen. I believe Hitler's first order for Messerschmidts was *five thousand*. Yet with this going on, hard as it is to believe, the Government took practically no steps to bring the Air Force to the level demanded by national safety. Yet they must have known. If a mere scribe like myself knew what was going on in Germany it is fantastic to suppose that the Government did not. Why did they not then muster the nation's resources instead of waiting until Hitler had established such a lead that he became virtually master of Europe? Could it be that they failed to grasp the power of the bomber? These are questions for which I have no answer. Not until we were on the very brink of war did the Government appear to perceive the danger. And by that time the public had perceived it.

For years past, inspired by heaven only knows what false information, most of the feature writers in the daily Press had been belittling the bomber as a potent factor of warfare, and/or making groundless claims that our few antiquated interceptors could stop enemy bombers. And it was that as much as anything that drove me into incoherence on these pages. Oh, I had some smart raps over the knuckles for those Editorials, make no mistake about that. But I had a power behind *me*. It was Truth. And judging from my correspondence, most readers recognised it.

Well, that's the story. It is all over, I think, except for the final bang. We have nearly finished eating humble pie. If Hitler or his henchmen ever had the idea of breaking the British Empire, they've lost their chance. But the very fact that they might once have done it is not pleasant to contemplate.

The Navy now has its own Air Force. In six years the Fleet Air Arm will be numerically greater than the Royal Air Force, the work of which will be chiefly army co-operation. When that time comes no doubt the question will again be raised, why maintain the Air Arm as a separate service?

W. E. J.



AT LAST— THE HELICOPTER

NIGEL TANGYE

Hanna Reitsch flying the Focke Achgelis Helicopter F.W. 6r at Staaken, with Ernst Udet hanging on to the tail wheel.

LEONARDO DA VINCI died in 1519. He was an artist, sculptor, mathematician, physicist, philosopher. He was also the first aircraft designer, success only eluding him because of the constructional limitations of the day. Not only did this prolific thinker and superb craftsman fashion the immortal picture of Mona Lisa; he also discovered the relationship between air resistance and lift, and the function of a screw in the attainment of that lift. Nearly four hundred years were to pass before the engineer was to capture the visions of Leonardo and to translate them into machines.

He saw quite clearly the possibilities of the helicopter. Writing of it in his notes he said: "If this instrument in the shape of a screw is well made and set revolving rapidly, it will bore into the air and climb high."

It was not until the middle of the 18th century that anyone was successful in demonstrating this principle. This was done by two Frenchmen, who constructed a model that attracted much attention at the time. But it was left to Sir George Cayley to improve upon the idea and in 1796 he constructed for himself a series of toys on the helicopter principle, one of them rising to a height of 90 feet.

From the beginning of the 19th century to the present day, when Professor Focke has at last produced a practicable helicopter, hundreds of experimenters have endeavoured to produce a machine which will land and rise vertically, at the same time possessing the power to transport people from one place to another by air.

All these inventors have failed to achieve their object with the exception of Focke. M. Bréguet has nearly succeeded but he has been outstripped in the past twelve months by the brilliance of Professor Focke.

In 1828 we read of the efforts of a carpenter, David Mayer, who thought that he could construct a helicopter that he could drive by his own muscular power. But he naturally got discouraged by the impossibility of the task and in later years wrote that "other work in my own

business being offered me, ascending by screws was abandoned until a more convenient season, and the more certain and substantial method of making stairs and ascending them step by step was substituted in its place."

In 1842 a distinct step forward was made by Mr. W. H. Phillips, an inventor of fire extinguishing appliances. Phillips constructed a steam-driven helicopter model which flew satisfactorily although only briefly, for its range was limited to a reservoir of steam carried at pressure in a chamber affixed to the model. In the ensuing years, many inventors were successful in building models which flew by utilising various systems of stored energy.

In 1880, Thomas Edison came on the aeronautical scene, with a singular lack of success. He constructed a helicopter weighing 160 lb. and carrying an electric motor which was alleged to produce 10 horse-power. When set in operation the device failed to exert a lift of more than 5 lb. thus leaving 155 lb. still to be lifted. His conclusion was that flight under such circumstances would never be possible until a motor was available that would deliver 50 horse-power and weigh not more than 40 lb. Disheartened by his failure he left aeronautical development to others and wrote: "The flying machine is bound to come, but it will take some time at the rate we are progressing now. Actually, he wrote those words only 10 months before the Wright brothers made their first flight on the sands at Kitihawk, North Carolina. Five years after this first flight, Edison expressed his lack of faith in the aeroplane and said: "To get the perfect flying machine they will have to come right back to what I told the reporters years ago (1897) when they asked me to give my views on the subject. I told them that whatever progress the airplane might make, the helicopter would come to be taken up by the advanced students of aeronautics." Who would say now that that prophecy is wide of the mark? The orthodox aeroplane that we know to-day, with its high and dangerous landing and taking-off speeds, is far from the ideal which



The Helicopter in the air at the F. A. I. meeting, Rangsdorf, June, 1938.

is more nearly attained by Professor Focke's helicopter of to-day.

During the war the Austrians were particularly active in attempting to solve the aerodynamical and mechanical problems of the helicopter. Lieut. Stefan Petroczy and Professor von Karman did produce a machine which gave rise for hopes. Its total weight was over one ton and it was driven by three engines of 120 horse-power each. One of the chief problems confronting helicopter designers is the provision of a safety device that can be brought into operation in the event of engine failure; for without such a device engine failure would naturally result in the machine falling to the ground like a stone, the lift ceasing with the stopping of the rotors, or lifting screws. These two Austrians provided for this contingency by affixing a parachute which would hold the whole aircraft in the event of such an emergency.

Some 15 flights were made with this machine, on some of which a height of over 100 feet was reached. The maximum load carried was four men, quite a creditable achievement it must be admitted.

After the war the British Air Ministry began to take an active interest in helicopters and announced in 1923 that a prize of £50,000 would be given to the inventor of a machine which fulfilled certain minimum conditions. These conditions included the attainment of a height of 2,000 feet, the ability to hover over a certain limited area and remain in the air for half an hour.

It had to fly 20 miles at an average speed of 60 miles an hour and land with its engine cut out from a height of 500 feet. Although some 20 entries to the competition were submitted, it was not surprising that the conditions proved much too difficult for any of them to be successful.

To the Frenchman, M. Bréguet, must be given the credit for the construction of the first helicopter to have something of a practical performance. The function of a helicopter is to rise and land vertically, to be able to carry a useful load, to have a good operational level flight speed, a good climb and the ability to land safely in the event of an engine failure. An aeroplane depends for its lift on forward speed, the ability to land below a certain minimum speed is therefore denied it. The helicopter depends for its lift on power-driven rotors, or propellers, which lift it into the air in the same way that an aeroplane's propeller pulls the machine forward. One of the chief bugbears of the helicopter designer is the torque which is always present whenever a propeller is revolved. This is due to the resistance to the air that is met by the revolving propeller. In a helicopter with a single rotor this torque would have the effect of revolving the body of the machine, in which was the engine, in the opposite direction to the rotor. In fact, it would never get off the ground. The obvious way of eliminating this torque is to have two rotors set in different planes (geometric planes) and revolving in opposite directions. Each counteracts the torque of the other. *(Continued on page 88)*



Fräulein Hanna Reitsch, Germany's "flying captain," whose superb handling of the helicopter during tests, and in the Deutschland Halle during the Berlin Motor Show, called for the highest praise.

THE HELICOPTER—(Continued from page 73)

M. Bréguet has favoured this method. In his machine the two rotors are set on a central column, one being above the other. But the snag to this arrangement is that the turbulence set up by the blades revolving in opposite directions close to one another is very considerable and leads to grave constructional difficulties. In bumpy air conditions it is easy to imagine the blades bending and touching, with fatal results.

How ingenious, then, is the way in which Professor Focke has tackled the problem. He has his rotors widely separated on outriggers set one on each side of the fuselage. They are driven by an engine set in the conventional place, the nose of the fuselage, and there is never the slightest possibility of their touching.

Before describing the control of this remarkable machine, let me recount what it has already achieved. Needless to say, this particular one, the first to be built, is purely experimental, but it has a performance approaching that of an aeroplane of equal power with the added tremendous advantage of being able to land and take-off vertically.

On June 25th and 26th, last year, this machine obtained the following World records:—

Without any streamlined fairings it attained a top speed of 76 miles an hour, a minimum speed of 0 miles an hour and a backward speed of 20 miles an hour.

It reached a height of 8,600 feet and had a climbing rate of 720 feet per minute. Its landing and take-off speeds were, of course, 0 miles an hour. Hovering in mid-air, it revolved through 360 degrees on a vertical axis in $2\frac{1}{2}$ seconds. Finally, it remained in the air 1 hour 22 minutes and flew a distance of 68 miles.

During the Berlin Motor Show, Fräulein Hanna Reitsch flew the machine regularly twice a day inside the Deutschland Halle, the first time an aircraft under power had ever been flown indoors. During the demonstration she flew the whole length of the hall both backwards and *sideways* under conditions of perfect control. Truly a remarkable achievement. The engine of this experimental machine is a 160 horse-power Bramo Sh. 14, and not the least interesting feature about the machine is that the system of control is confined to the limits of that of a simple aeroplane.

At rest on the ground the machine stands firmly on its tricycle undercarriage. The pilot starts the motor and warms it up in the orthodox manner. The propeller which is visible in the photograph is nothing more than a fan for the engine, it plays no part in drawing the machine through the air, this being accomplished by altering the angle of attack of the rotors. As soon as the engine is warmed, the pilot slowly lets in the

clutch and the rotors start revolving. They must be allowed to revolve at slow speed for a minute or two so that the transmission mechanism can get warmed up. Then, to rise vertically into the air, all the pilot has to do is to open up the throttle. During this operation the pilot must keep the nose pointing into wind as with an ordinary aeroplane.

Once in the air, the controls, which consist of stick and rudder-bar, are operated in the usual way. The machine will stay still so long as the stick is held back. When the pilot wishes to fly forward, he eases the stick forward. For top speed, he eases it still further forward and pushes the throttle open as much as possible. If for some curious reason he has a desire to fly backwards, all he has to do is to pull the stick back as far as it will go. The machine will turn if he applies rudder or aileron or both. The lateral control is obtained by adjustment of the blades. Finger-tip pressure on the stick, using it as though there were ailerons, achieves this. Indeed, the whole control of the machine is as balanced and effortless as that of a good aeroplane.

To carry out a vertical landing, the pilot points into wind and eases back on his stick and opens his throttle at a height of 100 feet or so. By doing this he will hover. All he has to do to lose height vertically is to ease gradually back on his throttle. As soon as he touches ground he throttles right back. If there is a high wind and there is a danger of taking-off again, he must disengage his rotor clutch.

Professor Focke has completely solved the matter of hazard in the event of engine failure by designing his machine so that with a flick of his finger the pilot can convert the helicopter into an autogiro and thus carry out an ordinary motorless glide landing. In this connection it is an interesting fact that the Focke helicopter can be flown entirely as an autogiro, although there is no object in doing this, yet still maintaining a reasonable performance. Instead of its rate of climb as a helicopter being 720 feet per minute, as an autogiro it is 266 feet per minute. This compares with the 295 feet per minute of the Cierva C. 30 autogiro.

The Focke helicopter is built by the Focke Achgelis Company, who are now engaged in building a six-seater machine. The possibilities of future development are enormous. Quite apart from the obvious advantages connected with vertical landings and take-offs for military and civil purposes, imagine the saving in lives that would result from the use of aircraft capable of slowing down to 0 miles per hour, if need be, in conditions of bad visibility. No longer would we hear of accidents, all too frequent nowadays, of airliners crashing and burning up as a result of rushing blindly through the air at hundreds of miles an hour and then hitting land obscured by fog.